Pioneer sound.vision.soul

Service Manual

ORDER NO.
ARP3313

PLASMA DISPLAY SYSTEM

PRO-1130HD
PRO-930HD

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
PRO-1130HD	—	AC120V	
PRO-930HD	—	AC120V	

● PRO-1130HD is combination of the following components.

Component	System	Service Manual	Remarks
PLASMA DISPLAY SYSTEM	PRO-1130HD	ARP3313	This manual.
PLASMA DISPLAY	PRO-506PU/KUC	ARP3290	
MEDIA RECEIVER	PRO-R06U/KUCXC	ARP3279, ARP3280	
SPEAKER SYSTEM	PDP-S36/XIN/UC	RRV3220	

● PRO-930HD is combination of the following components.

Component	System	Service Manual	Remarks
PLASMA DISPLAY SYSTEM	PRO-930HD	ARP3313	This manual.
PLASMA DISPLAY	PRO-436PU/KUC	ARP3291	
MEDIA RECEIVER	PRO-R06U/KUCXC	ARP3279, ARP3280	
SPEAKER SYSTEM	PDP-S35/XTW/UC	RRV3233	

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936

T – ZZR OCT. 2005 Printed in Japan

Pioneer sound.vision.soul

Service Manual

ORDER NO.
ARP3290

PLASMA DISPLAY

PRO-506PU

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	Remarks
	PRO-506PU		
KUC	○	AC120V	

● This service manual should be used together with the following manual(s):

Model No.	Order No.	Remarks
PDP-506PE/WYVI	ARP3267	SAFETY INFORMATION, EXPLODED VIEWS AND PARTS LIST, BLOCK DIAGRAM, PCB PARTS LIST, ADJUSTMENT, IC INFORMATION etc.

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936

T – ZZY SEPT. 2005 Printed in Japan

1. CONTRAST OF MISCELLANEOUS PARTS

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *Reference Nos. indicate the pages and Nos. in the service manual for the base model.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 → 56 x 10^1 → 561 ..... RD1/4PU 5 6 1 J
47k → 47 x 10^3 → 473 ..... RD1/4PU 4 7 3 J
0.5 → R50 ..... RN2H R 5 0 K
1 → 1R0 ..... RS1P 1 R 0 K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k → 562 x 10^1 → 5621 ..... RN1/4PC 5 6 2 1 F

■ CONTRAST TABLE

PRO-506PU/KUC and PDP-506PE/WYVI are constructed the same except for the following :

Ref. No.	Mark	Symbol and Description	Part No.		Remarks
			PDP-506PE WYVI	PRO-506PU KUC	
		PCB ASSY			
P17 - 1	NSP	50 X DRIVE ASSY	AWV2257	AWV2209	
		└ 50 X DRIVE ASSY	AWW1075	AWW1020	
P17 - 4		50 Y DRIVE ASSY	AWV2258	AWV2210	
		PACKING			
P9 - 1	⚠	Power Cord	ADG1214	ADG1215	
P9 - 6	NSP	Warranty	ARY1114	ARY1134	
P9 - 7		Ferrite Core	ATX1039	Not used	
P9 - 12		Power Cord Case	AHC1073	Not used	
P9 - 14		Upper Carton	AHD3345	AHD3421	
		REAR SECTION			
P11 - 6	NSP	Name Label (506PE)	AAL2661	Not used	
P11 - 6	NSP	Name Label (506EL)	Not used	AAL2712	
P11 - 8		AC Label PE	AAX3194	Not used	
		FRONT SECTION			
P13 - 1		F. Case Assy (506PE)	AMB2861	Not used	
P13 - 1		F. Case Assy (506EL)	Not used	AMB2857	
P13 - 3		Badge	AAM1098	Not used	
P13 - 3		Elite Badge	Not used	AAM1102	

■ CONTRAST OF PCB ASSEMBLIES

• 50 X DRIVE ASSY

AWW1020 and AWW1075 are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		AWW1075	AWW1020	
	[50 X RESONANCE BLOCK]			
	IC1101	AXF1142	AXF1155	
	C1101	ACG1112 (0.22 UF/250V)	ACG1088 (0.1UF/250V)	
	C1106 - C1110	Not used	ACE1178	
	C1112, C1113	ACG1112 (0.22UF/250V)	Not used	
	C1161 - C1164, C1166	ACE1168	Not used	

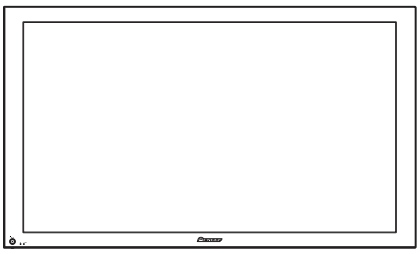
• 50 Y DRIVE ASSY

AWV2210 and AWZ2258 are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		AWV2258	AWV2210	
	[50 Y RESONANCE BLOCK]			
	IC2101	AXF1142	AXF1155	
	C2103	ACG1112 (0.22UF/250V)	ACG1088 (0.1UF/250V)	
	C2107, C2108	ACG1112 (0.22UF/250V)	Not used	
	C2131- C2134, C2136	ACE1168	ACE1178	
	[50 Y SUS BLOCK]			
	C2271	ACG1124 (0.1UF/100V)	ACG1118 (0.33UF/100V)	
	C2272	ACG1124 (0.1UF/100V)	Not used	

Pioneer sound.vision.soul

Service Manual



PDP-506PE

ORDER NO.
ARP3267

PLASMA DISPLAY

PDP-506PE
PDP-506PU

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
PDP-506PE	WYVI	AC220 - 240V	
PDP-506PU	KUCXC	AC120V	

Note:
Media Receivers up to Generation 5 (G5) cannot be connected with this unit.
Be sure to use a Media Receiver of Generation 6 (G6) (ex.: PDP-R06∗∗, etc.).

For details, refer to "Important Check Points for good servicing".

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936

T-IZY SEPT. 2005 printed in Japan

SAFETY INFORMATION

This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 - Proposition 65

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

SAFETY PRECAUTIONS

NOTICE : Comply with all cautions and safety related notes located on or inside the cabinet and on the chassis.

The following precautions should be observed :

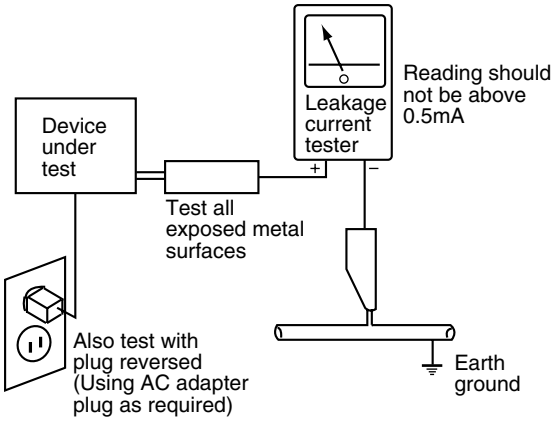
1. When service is required, even though the PDP UNIT an isolation transformer should be inserted between the power line and the set in safety before any service is performed.
2. When replacing a chassis in the set, all the protective devices must be put back in place, such as barriers, nonmetallic knobs, adjustment and compartment covershields, isolation resistor-capacitor, etc.
3. When service is required, observe the original lead dress. Extra precaution should be taken to assure correct lead dress in the high voltage circuitry area.
4. Always use the manufacture's replacement components. Especially critical components as indicated on the circuit diagram should not be replaced by other manufacture's. Furthermore where a short circuit has occurred, replace those components that indicate evidence of overheating.
5. Before returning a serviced set to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the set by the manufacture has become defective, or inadvertently defeated during servicing. Therefore, the following checks should be performed for the continued protection of the customer and servicetechnician.
6. Perform the following precautions against unwanted radiation and rise in internal temperature.
   - Always return the internal wiring to the original styling.
   - Attach parts (Gascket, Ferrite Core, Ground, Rear Cover, Shield Case etc.) surely after disassembly.
7. Perform the following precautions for the PDP panel.
   - When the front case is removed, make sure nothing hits the panel face, panel corner, and panel edge (so that the glass does not break).
   - Make sure that the panel vent does not break. (Check that the cover is attached.)
   - Handle the FPC connected to the panel carefully. Twisting or pulling the FPC when connecting it to the connector will cause it to peel off from the panel.
8. Pay attention to the following.
   - Pay extreme caution when the front case and rear panel are removed because this may cause a high risk of disturbance to TVs and radios in the surrounding.

Leakage Current Cold Check

With the AC plug removed from an AC power source, place a jumper across the two plug prongs. Turn the AC power switch on. Using an insulation tester (DC 500V), connect one lead to the jumpered AC plug and touch the other lead to each exposed metal part (input/output terminals, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis. Exposed metal parts having a return path to the chassis should have a minimum resistor reading of 0.3MΩ and a maximum resistor reading of 5MΩ. Any resistor value below or above this range indicates an abnormality which requires corrective action. Exposed metal parts not having a return path to the chassis will indicate an open circuit.

Leakage Current Hot Check

Plug the AC line cord directly into an AC power source (do not use an isolation transformer for this check).
Turn the AC power switch on.
Using a "Leakage Current Tester (Simpson Model 229 equivalent)", measure for current from all exposed metal parts of the cabinet (input/output terminals, screwheads, metal overlays, control shaft, etc.), particularly any exposed metal part having a return path to the chassis, to a known earth ground (water pipe, conduit, etc.). Any current measured must not exceed 0.5mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE SET TO THE CUSTOMER.

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in PIONEER set have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.
Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which dose not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire or other hazards.
Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

■Charged Section

The places where the commercial AC power is used without passing through the power supply transformer.
If the places are touched, there is a risk of electric shock. In addition, the measuring equipment can be damaged if it is connected to the GND of the charged section and the GND of the non-charged section while connecting the set directly to the commercial AC power supply. Therefore, be sure to connect the set via an insulated transformer and supply the current.

1. Power Cord
2. AC Inlet
3. Power Switch (S1)
4. Fuse (In the POWER SUPPLY Unit)
5. STB Transformer and Converter Transformer (In the POWER SUPPLY Unit)
6. Other primary side of the POWER SUPPLY Unit

■High Voltage Generating Point

The places where voltage is 100V or more except for the charged places described above. If the places are touched, there is a risk of electric shock.

If the procedures described in "7.1.5 POWER ON/OFF FUNCTION FOR THE LARGE-SIGNAL SYSTEM" are performed before the power is turned off, the voltage will be discharged in about 30 seconds.

1. POWER SUPPLY Unit.....(205V)
2. 50 X DRIVE Assy ..... (–180V to 205V)
3. 50 Y DRIVE Assy ..... (500V)
4. 50 SCAN A Assy ..... (500V)
5. 50 SCAN B Assy ..... (500V)
6. SUS CLAMP 1 Assy .....(–180V to 205V)
7. SUS CLAMP 2 Assy .....(–180V to 205V)

: Part is Charged Section.
: Part is the High Voltage Generating Points other than the Charged Section.

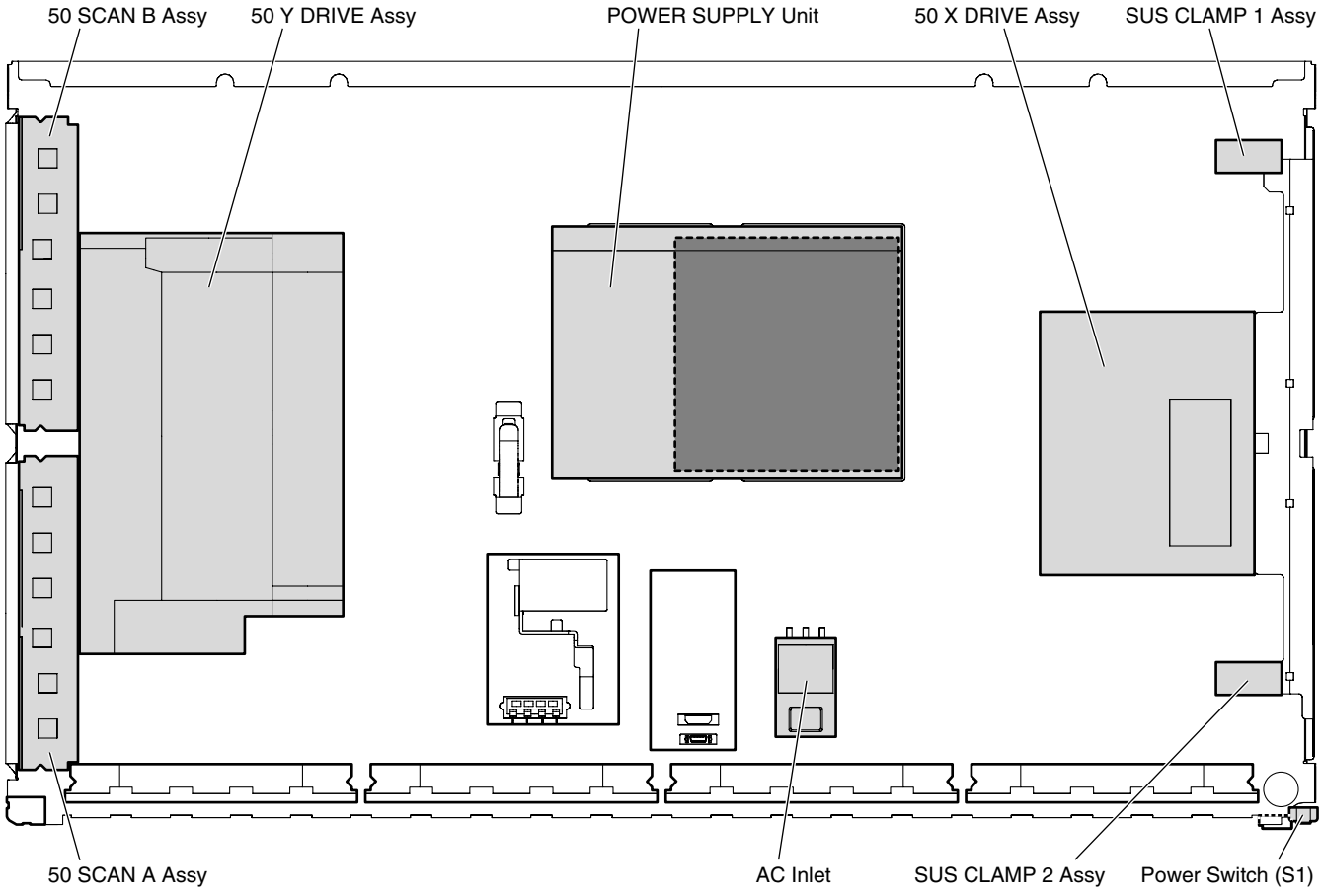


Fig.1 Charged Section and High Voltage Generating Point (Rear View)

[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol.
Please be sure to confirm and follow these procedures.

1. Product safety

Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification(addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris.
Soldering should be finished with the proper quantity. (Refer to the example)

④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs.
In addition, be sure that there are no pinched wires, etc.

⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages.
If you find a damaged power cord, please exchange it with a suitable one.

⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries.
Please pay attention to your surroundings and repair safely.

2. Adjustments

To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification.
Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts

Use grease and adhesives that are equal to the specified substance.
Make sure the proper amount is applied.

4. Cleaning

For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws

To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

CONTENTS

1. SPECIFICATIONS

Item	50" Plasma Display, Model: PDP-506PE	50" Plasma Display, Model: PDP-506PU
Number of Pixels	1280 × 768 pixels	1280 × 768 pixels
Audio Amplifier	13 W + 13 W (1 kHz, 10 %, 8Ω)	13 W + 13 W (1 kHz, 10 %, 8Ω)
Surround System	SRS/FOCUS/TruBass	SRS/FOCUS/TruBass
Power Requirement	220 - 240 V AC, 50/60 Hz, 344 W (0.4 W Standby)	120 V AC, 60 Hz, 355 W (0.2 W Standby)
Dimensions	1224 (W) × 717 (H) × 92 (D) mm	1224 (W) × 717 (H) × 92 (D) mm (48 3/16 (W) × 28 1/4 (H) × 3 5/8 (D) inches)
Weight	31.8 kg (70.1 lbs.)	31.8 kg (70.1 lbs.)

• Design and specifications are subject to change without notice.

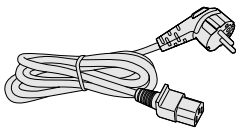
Trademarks

• FOCUS, WOW, SRS and **(●)**® symbol are trademarks of SRS Labs, Inc.
FOCUS and SRS technologies are incorporated under license from SRS Labs, Inc.
• This product includes FontAvenue® fonts licensed by NEC Corporation.
FontAvenue is a registered trademark of NEC Corporation.
• HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.
• The names of companies or institutions are trademarks or registered trademarks of the respective companies or institutions.

Accessories

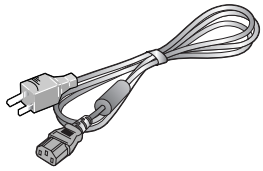
Power cord (2 m)

For PDP-506PE



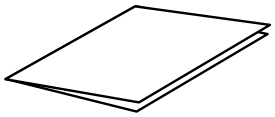
(ADG1214)

For PDP-506PU

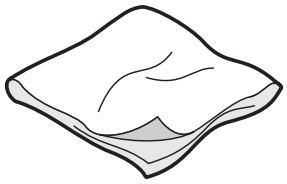


(ADG1215)

Only the power cord that is appropriate in your country or region is supplied.

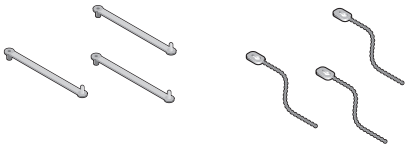


Warranty card



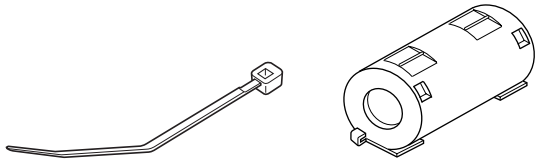
Cleaning cloth
(AED1285)

Binder Assy (AEC1908)



Speed clamp x 3 Bead band x 3

Ferrite Core (ATX1039)(PDP-506PE only)

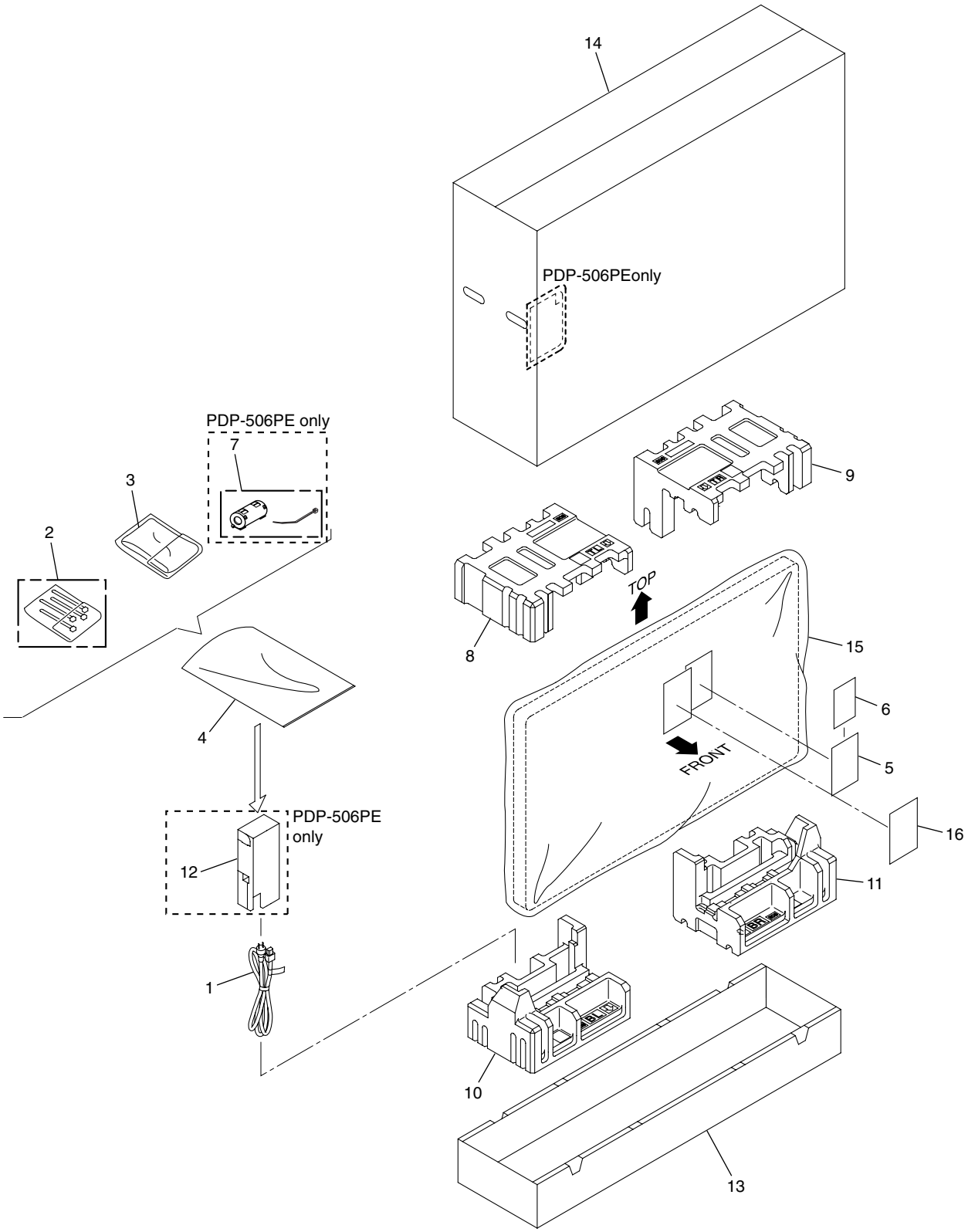


Cable tie Ferrite core

2. EXPLODED VIEWS AND PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

2.1 PACKING SECTION



(1) PACKING SECTION PARTS LIST

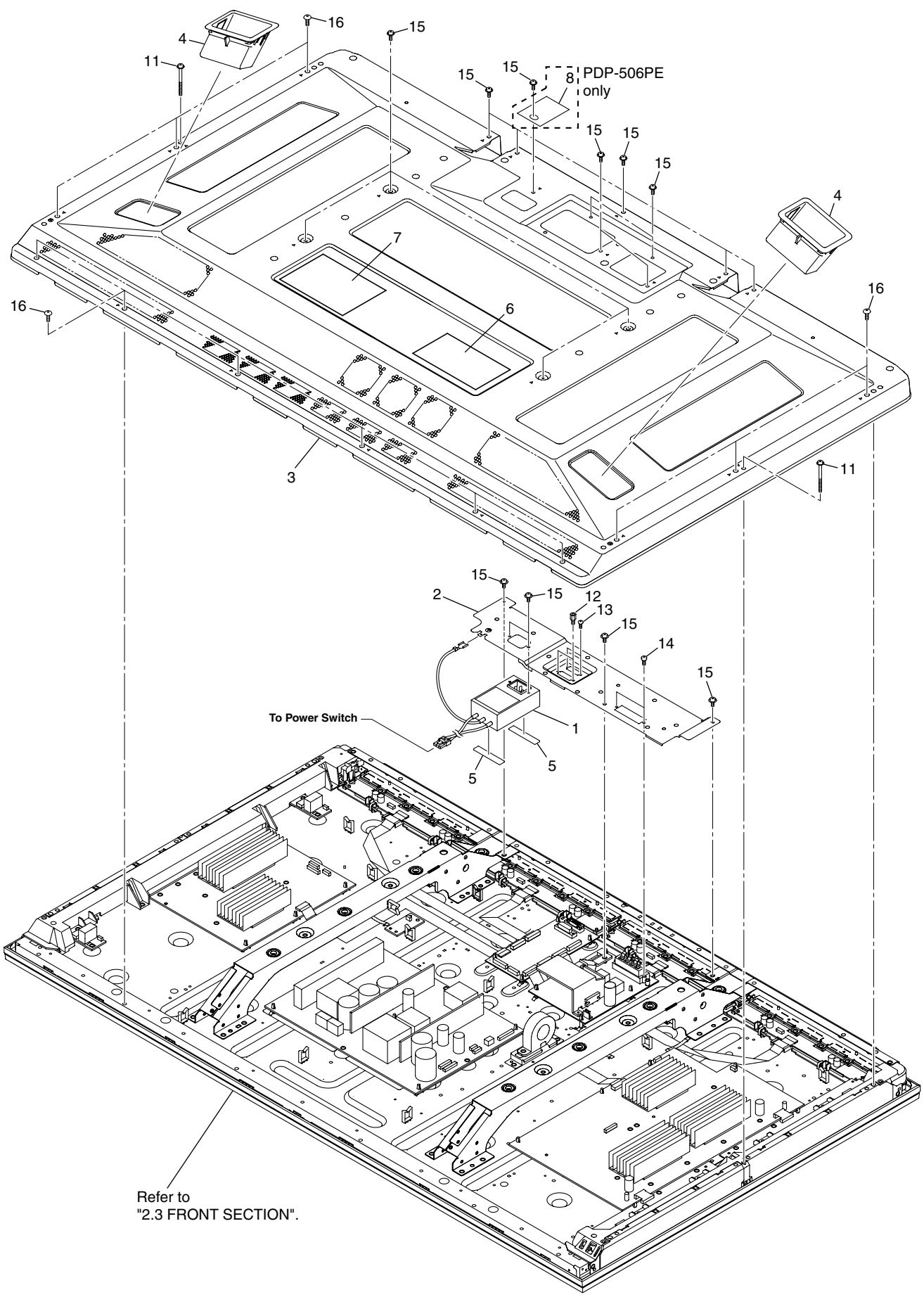
Mark	No.	Description	Part No.
⚠	1	Power Cord	See Contrast table (2)
	2	Binder Assy	AEC1908
	3	Cleaning Cloth	AED1285
	4	Polyethylene Bag S	See Contrast table (2)
NSP	5	Catalogue Bag	See Contrast table (2)
NSP	6	Warranty card	See Contrast table (2)
⚠	7	Ferrite Core	See Contrast table (2)
	8	Pad (50T-L)	See Contrast table (2)
	9	Pad (50T-R)	See Contrast table (2)
	10	Pad (50B-L)	See Contrast table (2)
	11	Pad (50B-R)	See Contrast table (2)
	12	Power Cord Case	See Contrast table (2)
	13	Under Carton	See Contrast table (2)
	14	Upper Carton	See Contrast table (2)
	15	Mirror Mat	See Contrast table (2)
	16	Caution Card	See Contrast table (2)

(2) CONTRAST TABLE

PDP-506PE/WYVI and PDP-506PU/KUCXC are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-506PE/WYVI	PDP-506PU/KUCXC
⚠	1	Power Cord	ADG1214	ADG1215
	4	Polyethylene Bag S	AHG1338	AHG1348
NSP	5	Catalogue Bag	AHG1340	AHG1347
NSP	6	Warranty Card	ARY1114	ARY1145
⚠	7	Ferrite Core	ATX1039	Not used
	8	Pad (50T-L)	AHA2427	AHA2459
	9	Pad (50T-R)	AHA2428	AHA2460
	10	Pad (50B-L)	AHA2429	AHA2461
	11	Pad (50B-R)	AHA2430	AHA2462
	12	Power Cord Case	AHC1073	Not used
	13	Under Carton (50)	AHD3344	Not used
	13	Under Carton (506PU)	Not used	AHD3379
	14	Upper Carton (506PE)	AHD3345	Not used
	14	Upper Carton (506PU)	Not used	AHD3383
	15	Mirror Mat	AHG1284	AHG1352
	16	Caution Card	ARM1232	ARM1239

2.2 REAR SECTION



(1) REAR SECTION PARTS LIST

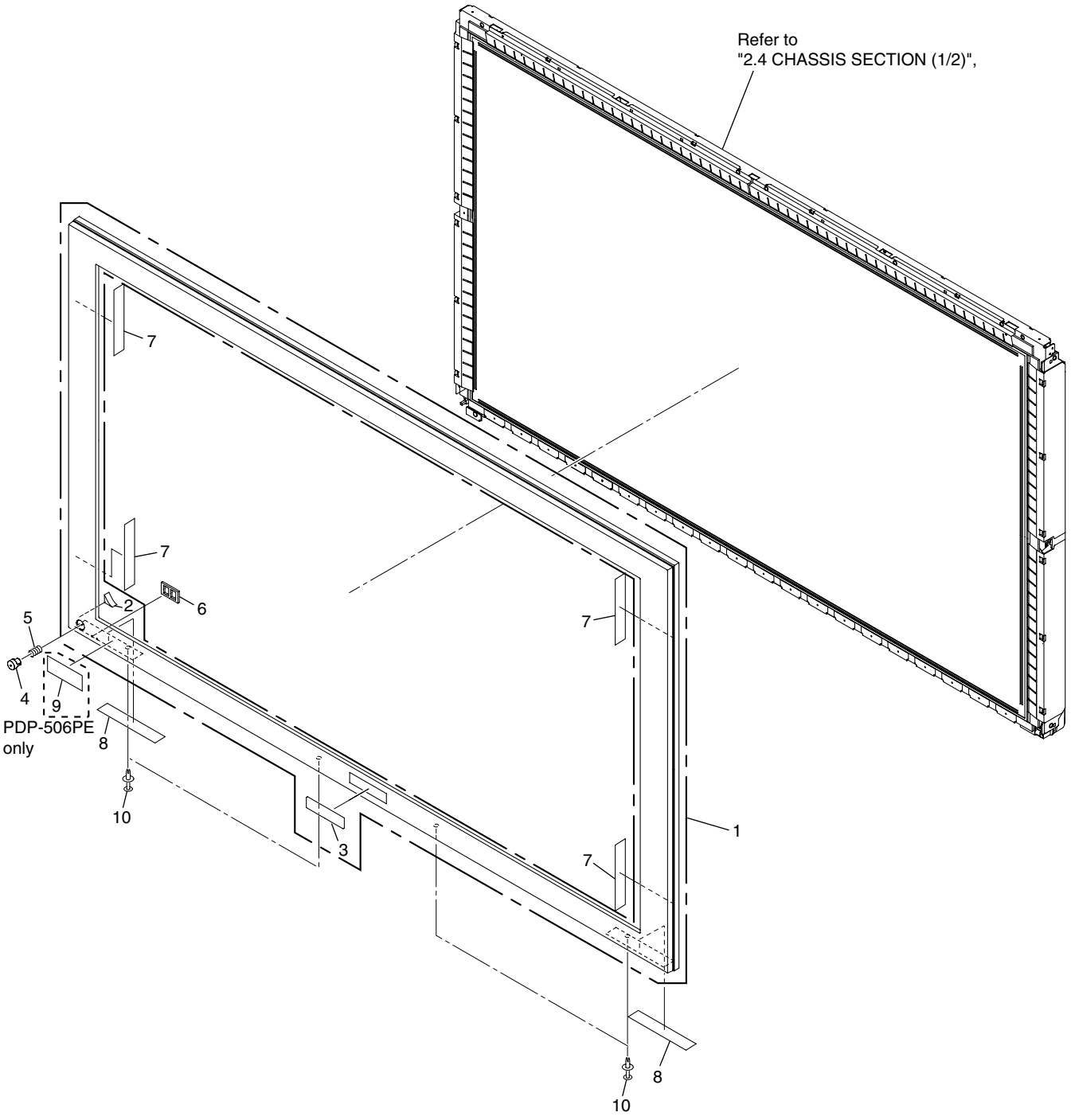
Mark	No.	Description	Part No.
⚠	1	AC Inlet	AKP1274
	2	Control Plate	AND1185
	3	Rear Case (506)	ANE1639
	4	Inner Grip Assy	AMR3434
	5	AC Cushion	AEC2035
NSP	6	Model Label	See Contrast table (2)
	7	Caution Label	See Contrast table (2)
	8	AC Label PE	See Contrast table (2)
	9	•••••	
	10	•••••	
	11	Screw (3 x 40P)	ABA1332
	12	Hexagon Head Screw	BBA1051
	13	Screw	PMZ26P060FTB
	14	Screw	BPZ30P080FTB
	15	Screw	AMZ30P060FTB
	16	Screw	TBZ40P080FTB

(2) CONTRAST TABLE

PDP-506PE/WYVI and PDP-506PU/KUCXC are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-506PE/WYVI	PDP-506PU/KUCXC
NSP	6	Model Label (506PE)	AAL2661	Not used
NSP	6	Model Label (506PU)	Not used	AAL2679
	7	Caution Label	AAX3117	AAX3075
	8	AC Label PE	AAX3194	Not used

2.3 FRONT SECTION



(1) FRONT SECTION PARTS LIST

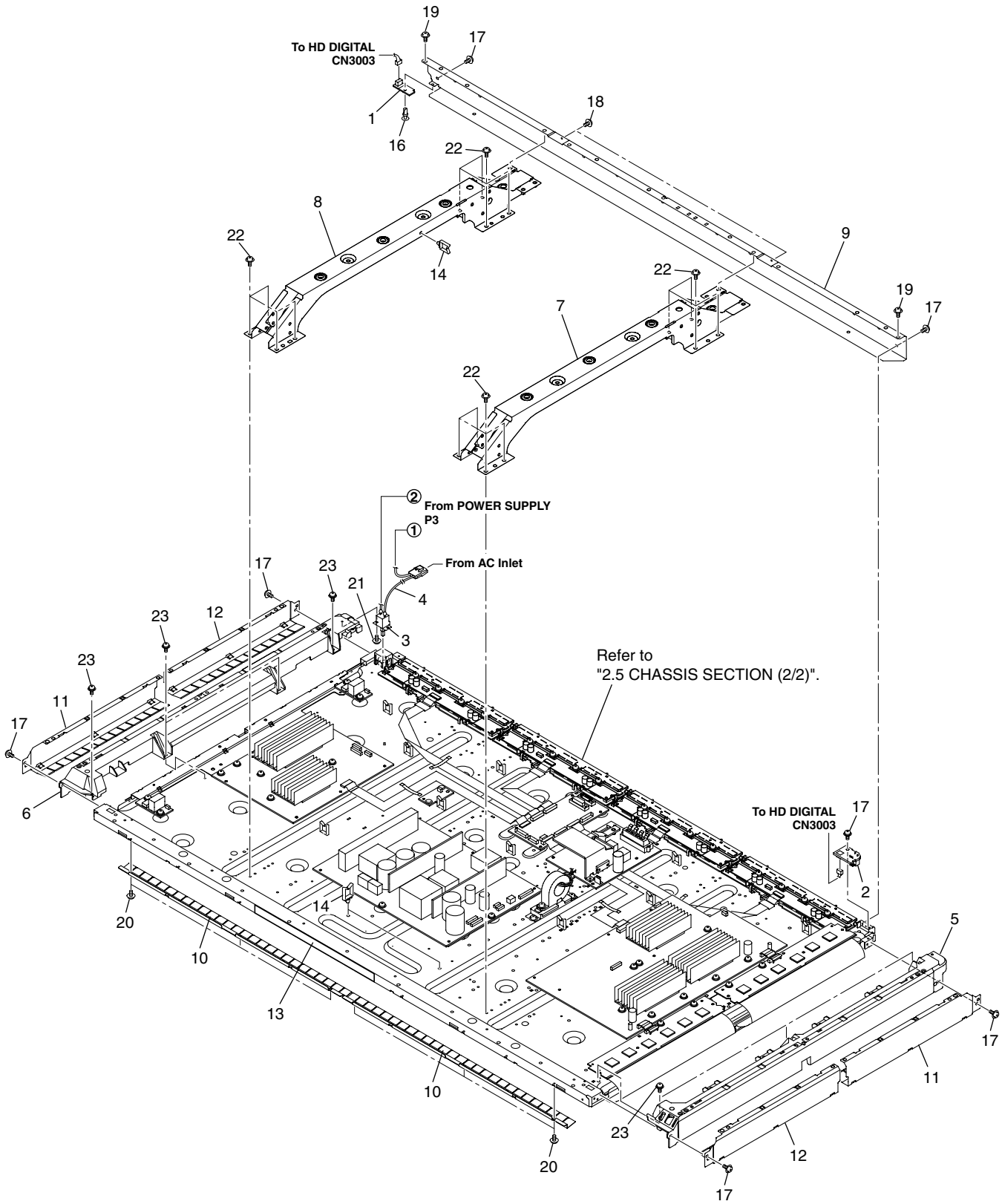
Mark	No.	Description	Part No.
	1	Front Case Assy (506PE)	AMB2861
	2	Corner Cushion	AEB1416
	3	Pioneer Name Plate	AAM1098
	4	Power Button	AAD4133
	5	Coil Spring	ABH1120
	6	Blind Cushion	AEB1415
	7	Insulation Sheet A	AED1283
	8	Insulation Sheet B	AED1284
	9	Power Display Label (506)	See Contrast table (2)
	10	Screw Rivet	AEC1877

(2) CONTRAST TABLE

PDP-506PE/WYVI and PDP-506PU/KUCXC are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-506PE/WYVI	PDP-506PU/KUCXC
	9	Power Display Label (506)	AAX3217	Not used

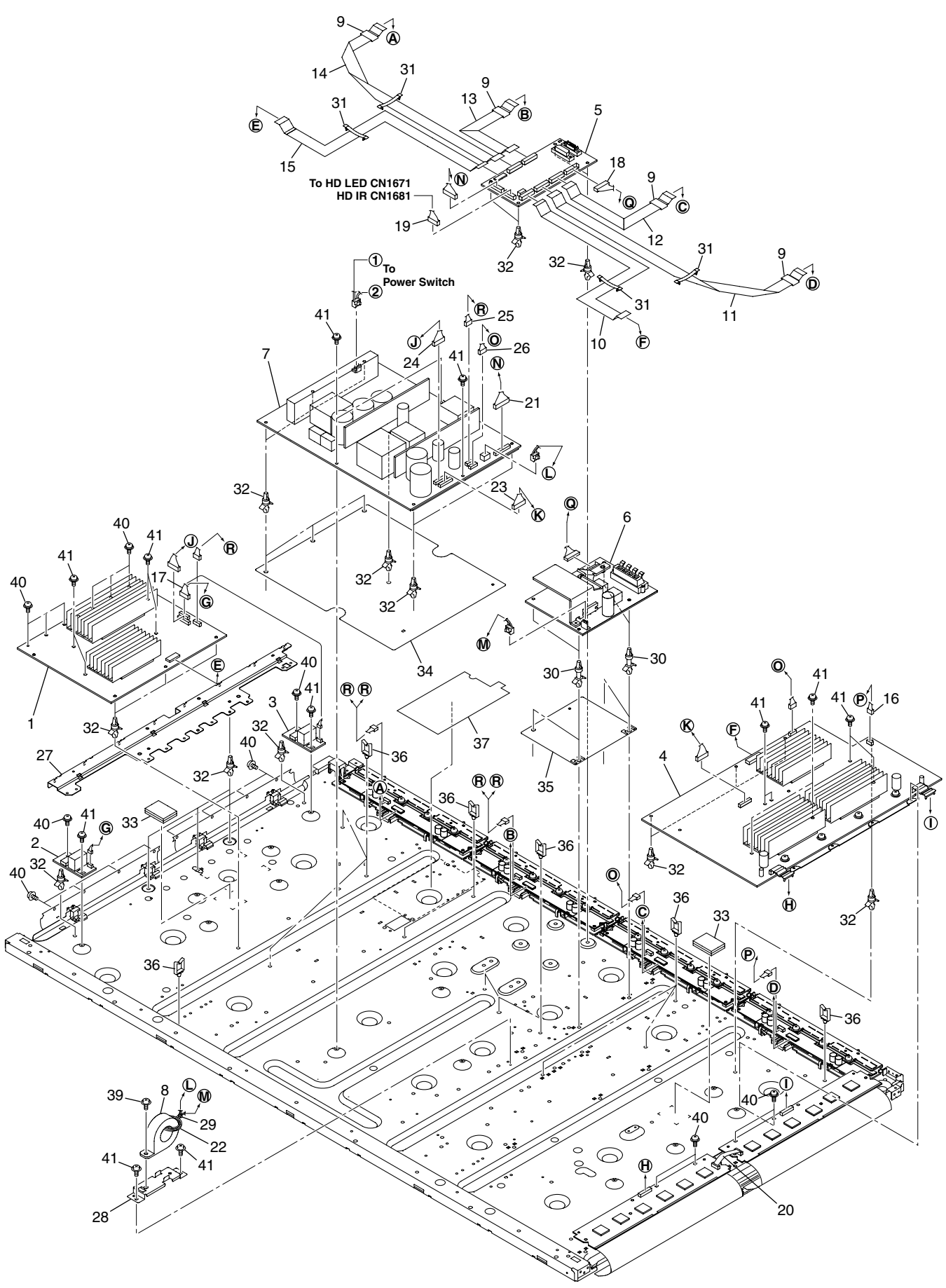
2.4 CHASSIS SECTION (1/2)



CHASSIS SECTION (1/2) PARTS LIST

Mark	No.	Description	Part No.
	1	HD LED Assy	AWW1029
	2	HD IR Assy	AWW1030
⚠	3	Power Switch (S1)	ASG1092
	4	Housing Wire (50)(J103)	ADX3112
	5	Front Chassis VL (50)	AMA1014
	6	Front Chassis VR (50)	AMA1015
	7	Sub Frame L Assy (506)	ANA1860
	8	Sub Frame R Assy (506)	ANA1861
	9	Front Chassis H Assy (50)	ANA1883
	10	Panel Holder H (50)	ANG2769
	11	Panel Holder V1 (50)	ANG2770
	12	Panel Holder V2 (50)	ANG2771
	13	Cushion	AEB1424
	14	Wire Saddle	AEC1745
	15	•••••	
	16	Nyron Rivet	AEC1671
	17	Screw	ABZ30P080FTC
	18	Screw	AMZ30P060FTB
	19	Screw	APZ30P080FTB
	20	Screw	BBZ30P060FTC
	21	Screw	BPZ30P080FTB
	22	Screw	TBZ40P080FTB
	23	Screw	VBB30P080FNI

2.5 CHASSIS SECTION (2/2)



(1) CHASSIS SECTION (2/2) PARTS LIST

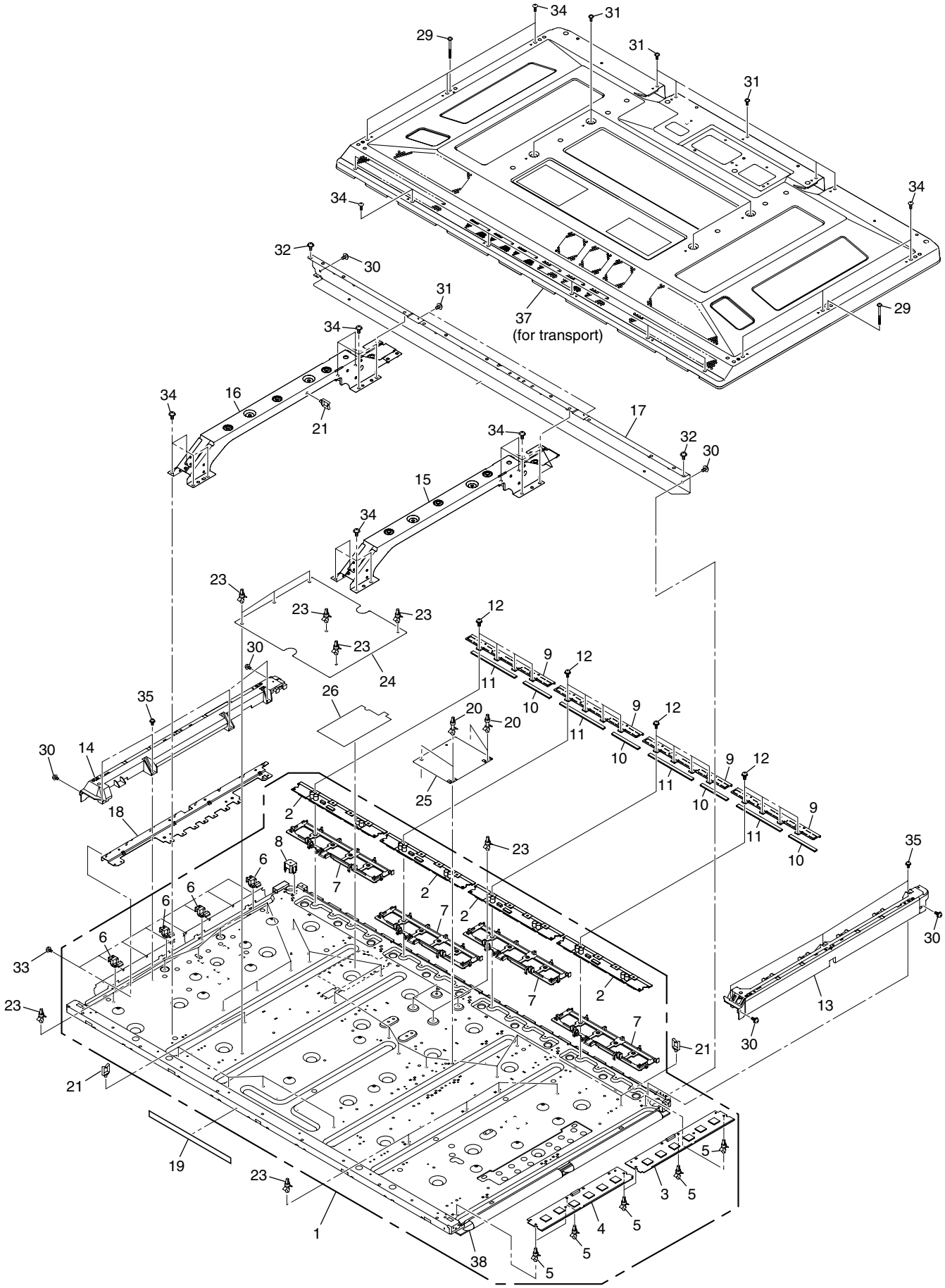
Mark	No.	Description	Part No.
	1	50 X DRIVE Assy	See Contrast table (2)
	2	SUS CLAMP 1 Assy	AWW1022
	3	SUS CLAMP 2 Assy	AWW1023
	4	50 Y DRIVE Assy	See Contrast table (2)
	5	HD DIGITAL Assy	AWW1028
	6	HD AUDIO Assy	AWV2203
⚠	7	POWER SUPPLY Unit	AXY1112
	8	Ring Core with Case	ATX1042
	9	Ferrite Core	ATX1048
	10	Flexible Cable (J201)	ADD1293
	11	Flexible Cable (J202)	ADD1294
	12	Flexible Cable (J203)	ADD1295
	13	Flexible Cable (J204)	ADD1296
	14	Flexible Cable (J205)	ADD1297
	15	Flexible Cable (J206)	ADD1298
	16	4P Housing Wire (J108)	ADX3117
	17	6P Housing Wire (J109)	See Contrast table (2)
	18	12P Housing Wire (J110)	See Contrast table (2)
	19	6P Housing Wire (J111)	ADX3120
	20	3P Housing Wire (J113)	See Contrast table (2)
	21	14P Housing Wire (J104)	ADX3158
	22	3P Housing Wire (J105)	ADX3159
	23	9P Housing Wire (J101)	ADX3186
	24	8P Housing Wire (J102)	ADX3187
	25	5P Housing Wire (J106)	ADX3188
	26	6P Housing Wire (J107)	ADX3189
	27	Conductive Plate XA	ANG2776
	28	FC Stay	ANG2815
	29	Binder	AEC-093
NSP	30	PCB Spacer	AEC1188
	31	Flat Clamp	AEC1879
	32	PCB Spacer	AEC1941
	33	Drive Silicone Sheet	AEH1095
	34	Power Supply Insulation Sheet	AMR3447
	35	Audio Insulation Sheet	AMR3469
	36	Wire Saddle	AEC1745
NSP	37	Address Sheet	AMR3491
	38	•••••	
	39	Screw	ABA1324
	40	Screw	PMB30P060FTC
	41	Screw	VBB30P080FNI

(2) CONTRAST TABLE

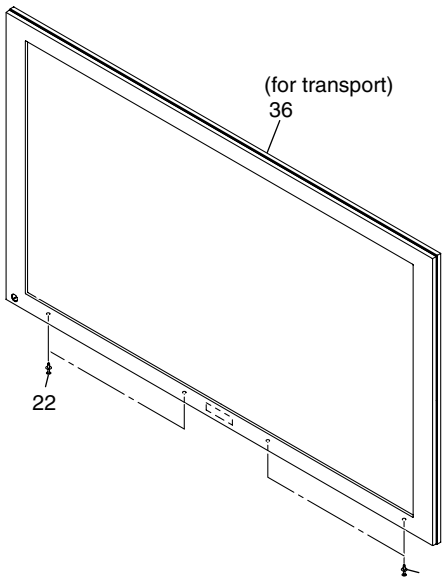
PDP-506PE/WYVI and PDP-506PU/KUCXC are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-506PE/WYVI	PDP-506PU/KUCXC
	1	50 X DRIVE Assy	AWW1075	AWW1020 or AWW1075
	4	50 Y DRIVE Assy	AWV2258	AWV2210 or AWV2258
	17	6P Housing Wire (J109)	ADX3118	ADX3132
	18	12P Housing Wire (J110)	ADX3119	ADX3133
	20	3P Housing Wire (J113)	ADX3122	ADX3136

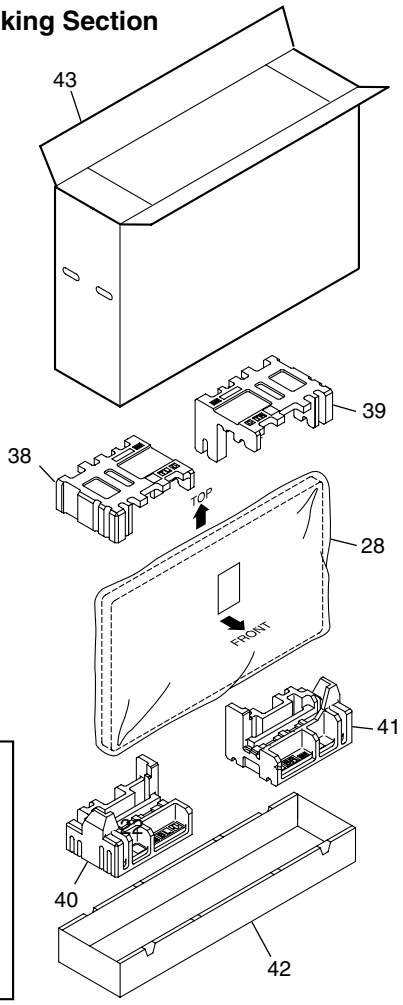
2.6 PDP SERVICE ASSY 506P (AWU1134)



• **Front Section**



• **Packing Section**



Note when replacing with the PDP Service Assy 506P

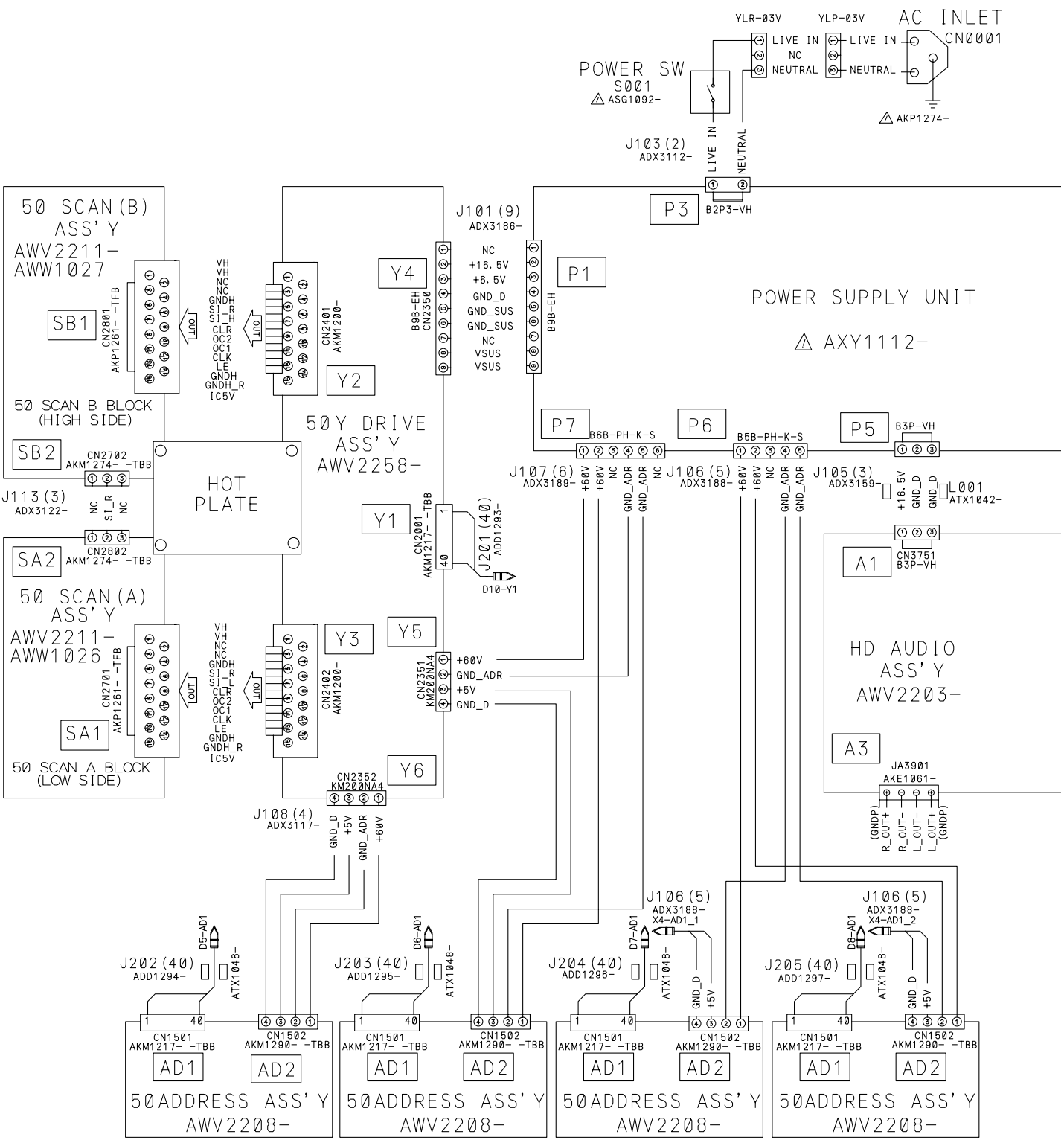
The Power Switch (S1), HD LED Assy, and HD IR Assy are not included in the PDP Service Assy 506P. Before replacement with the PDP Service Assy 506P, the following components of the Service Assy must be temporarily detached to attach the above-mentioned parts (parts from the original unit or newly purchased):
- Front Chassis H Assy (50) (ANA1883)
- Front Chassis VL (50) (AMA1014)
- Front Chassis VR (50) (AMA1015)

PDP SERVICE ASSY 506P (AWU1134) PARTS LIST

Mark	No.	Description	Part No.
NSP	1	Panel Chassis (506) Assy	AWU1143
NSP	2	50 ADDRESS Assy	AWV2208
NSP	3	50 SCAN A Assy	AWW1026
NSP	4	50 SCAN B Assy	AWW1027
	5	PCB Spacer	AEC1944
	6	Conductive Plate Holder	AMR3446
	7	ADDRESS Holder Assy (50)	AMR3454
	8	Tube Cover	AMR3445
	9	Address Heatsink (50)	ANH1635
	10	Address Silicone A	AEH1093
	11	Address Silicone B	AEH1094
	12	Screw	BBB30P120FNI
	13	Front Chassis VL (50)	AMA1014
	14	Front Chassis VR (50)	AMA1015
	15	Sub Frame L Assy (506)	ANA1860
	16	Sub Frame R Assy (506)	ANA1861
	17	Front Chassis H Assy (50)	ANA1883
	18	Conductive Plate XA	ANG2776
	19	Cushion	AEB1424
NSP	20	PCB Spacer	AEC1188
	21	Wire Saddle	AEC1745
	22	Screw Rivet	AEC1877
	23	PCB Spacer	AEC1941
	24	Power Supply Insulation Sheet	AMR3447
	25	Audio Insulation Sheet	AMR3469
NSP	26	Address Sheet	AMR3491
NSP	27	Chassis Assy (50)	ANA1830
	28	Protect Sheet	AHG1331
	29	Screw (3 x 40P)	ABA1332
	30	Screw	ABZ30P080FTC
	31	Screw	AMZ30P060FTB
	32	Screw	APZ30P080FTB
	33	Screw	PMB30P060FTC
	34	Screw	TBZ40P080FTB
	35	Screw	VBB30P080FNI
NSP	36	Front Case Assy (506 serivice) (for transport)	AMB2889
NSP	37	Rear Case (506) (for transport)	ANE1639
	38	Pad (50T-L)	AHA2427
	39	Pad (50T-R)	AHA2428
	40	Pad (50B-L)	AHA2429
	41	Pad (50B-R)	AHA2430
	42	Under Carton	AHA3344
	43	Upper Carton (506 S.V.C)	AHA3430

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 OVERALL CONNECTION DIAGRAM



CONNECTOR PIN ASIGN

SYSTEM CABLE

CN1501 AD1	→CN3501 D5	CN1501 AD1	→CN3503 D7
CN1501 AD1	→CN3502 D6	CN1501 AD1	→CN3504 D8

1 →40. GND_D	21→20. CN
2 →39. DIV0	22→19. NC
3 →38. DIV1	23→18. GND_D
4 →37. GND_D	24→17. NC
5 →36. +3.3V	25→16. BP
6 →35. +3.3V	26→15. BN
7 →34. GND_D	27→14. NC
8 →33. GND_D	28→13. GND_D
9 →32. NC	29→12. NC
10→31. DP	30→11. AP
11→30. DN	31→10. AN
12→29. NC	32→9. NC
13→28. GND_D	33→8. GND_D
14→27. NC	34→7. GND_D
15→26. CLKP	35→6. +8V
16→25. CLKN	36→5. +8V
17→24. NC	37→4. GND_D
18→23. GND_D	38→3. GND_D
19→22. NC	(CN3504のPSIZE)
20→21. CP	39→2. ADR_PD
	40→1. NC

CN3506 D10 →CN2001 Y1

1→40. GND_D	21→20. GND_D
2→39. SCN5V_PD	22→19. YSUS-MSK
3→38. SI_L	23→18. YNRST
4→37. SI_H	24→17. YRsv2
5→36. GND_D	25→16. GND_D
6→35. CLR	26→15. YNOFS
7→34. CLK	27→14. YRsv3
8→33. GND_D	28→13. YSOFT-D
9→32. LE	29→12. GND_D
10→31. OC2	30→11. VOFS_ADJ
11→30. OC1 (-1)	31→10. VYPRST_ADJ
12→29. GND_D	32→ 9. GND_D
13→28. YSUS-B	33→ 8. GND_D
14→27. YSUS-U	34→ 7. NC
15→26. GND_D	35→ 6. GND_D
16→25. YSUS-D	36→ 5. YDD_PD
17→24. YSUS-G	37→ 4. YSUS_PD
18→23. GND_D	38→ 3. SCAN_PD
19→22. YPR-U	39→ 2. YDRV_PD
20→21. YRsv1	40→ 1. PSW

CN3505 D9 →CN1001 X1

1→18. PSW	
2→17. XSUS_PD	
3→16. XDD_PD	
4→15. XDRV_PD	
5→14. GND_D	
6→13. XRsv1	
7→12. XSUS_MSK	
8→11. GND_D	
9→10. XNR-D	
10→ 9. GND_D	
11→ 8. XSUS-Q	
12→ 7. GND_D	
13→ 6. XSUS-D	
14→ 5. GND_D	
15→ 4. XSUS-U	
16→ 3. GND_D	
17→ 2. XSUS-B	
18→ 1. GND_D	

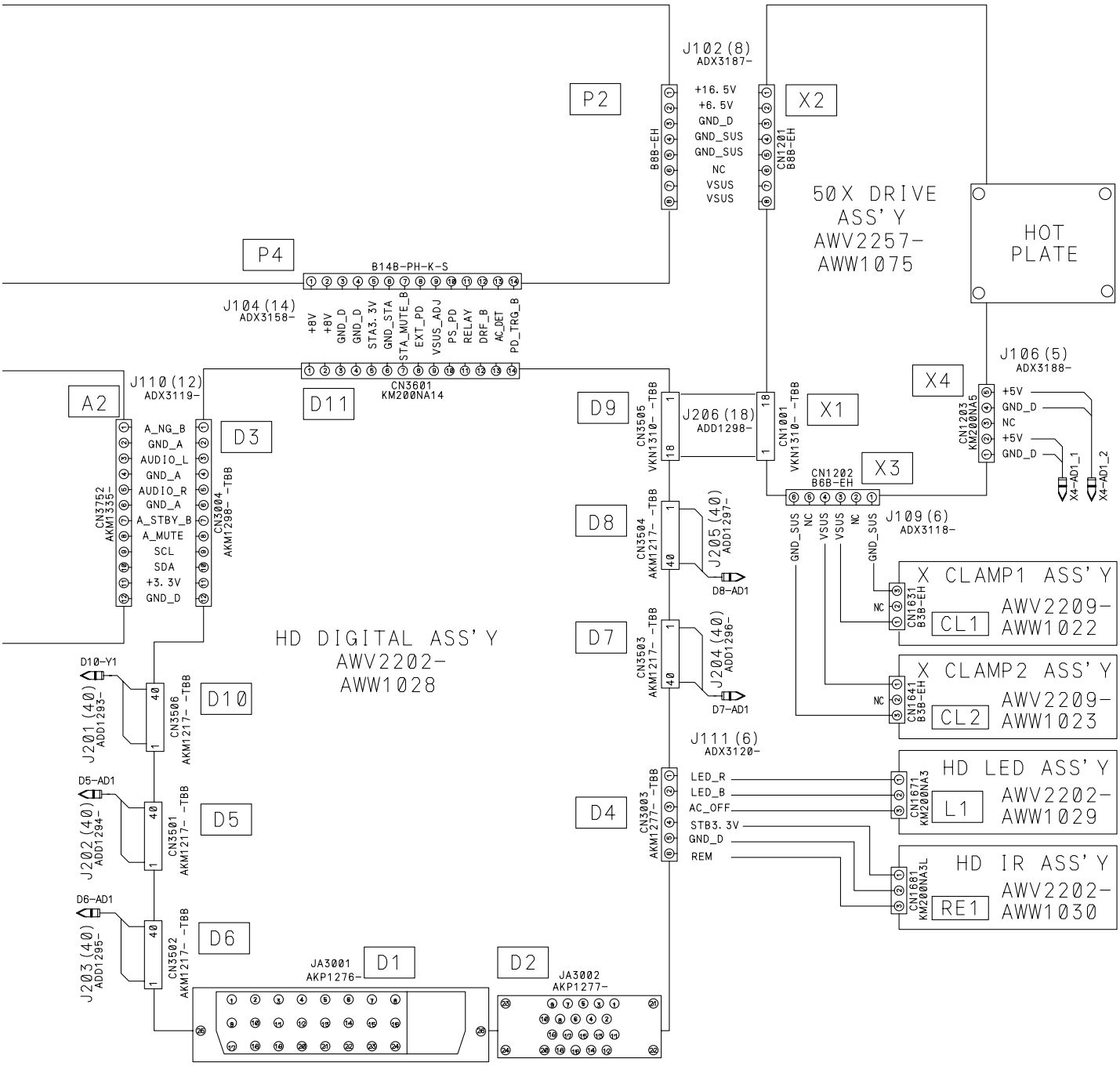
JA3001 AKP1276-

1. RX2-	
2. RX2+	
3. GND_D	
4. NC	
5. NC	
6. DDC_SCL	
7. DDC_SDA	
8. NC	
9. RX1-	
10. RX1+	
11. GND_D	
12. NC	
13. NC	
14. DDC_+5V	
15. GND_D	
16. HPD	
17. RX0-	
18. RX0+	
19. GND_D	
20. NC	
21. NC	
22. GND_D	
23. RXC+	
24. RXC-	

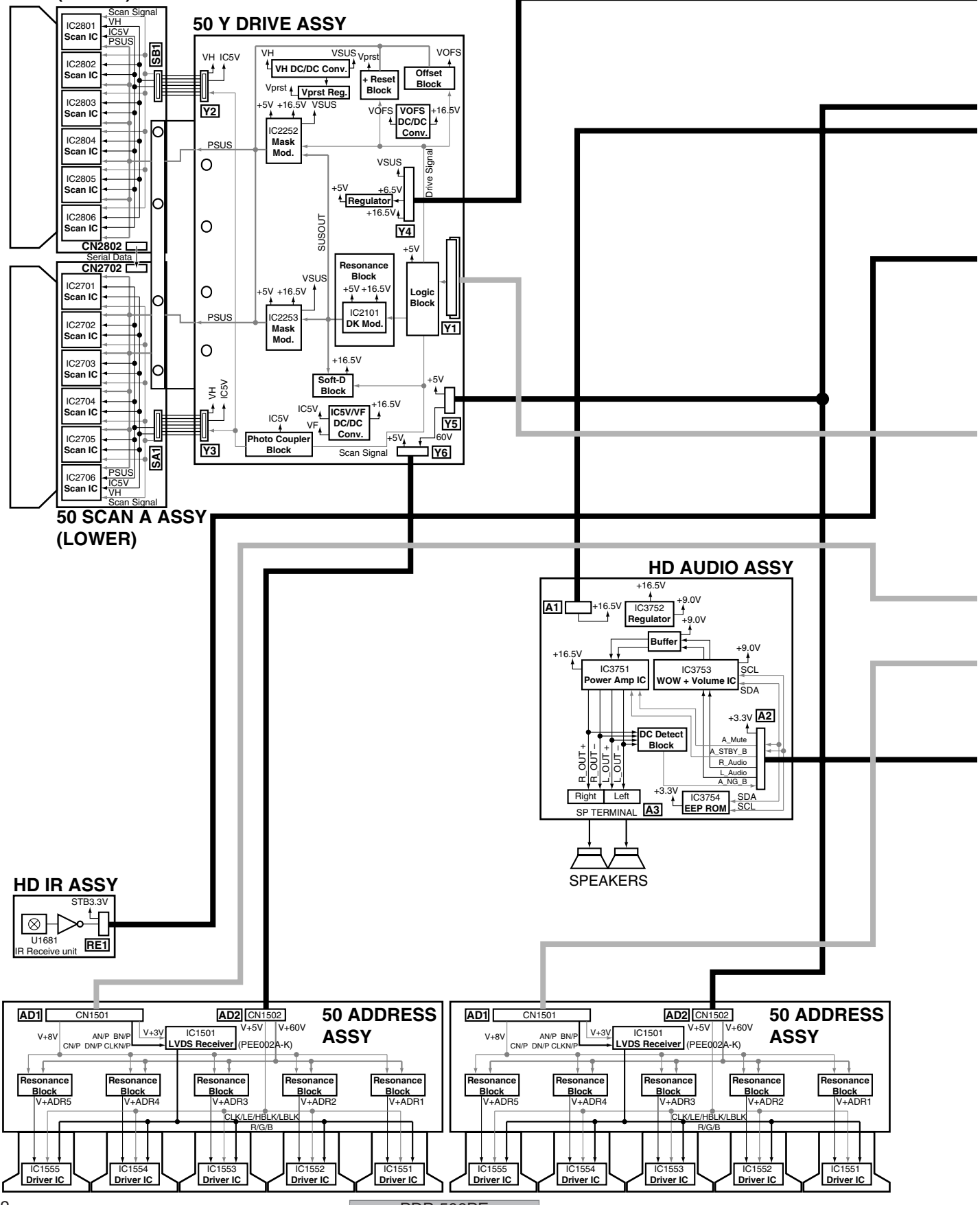
JA3002 AKP1277-

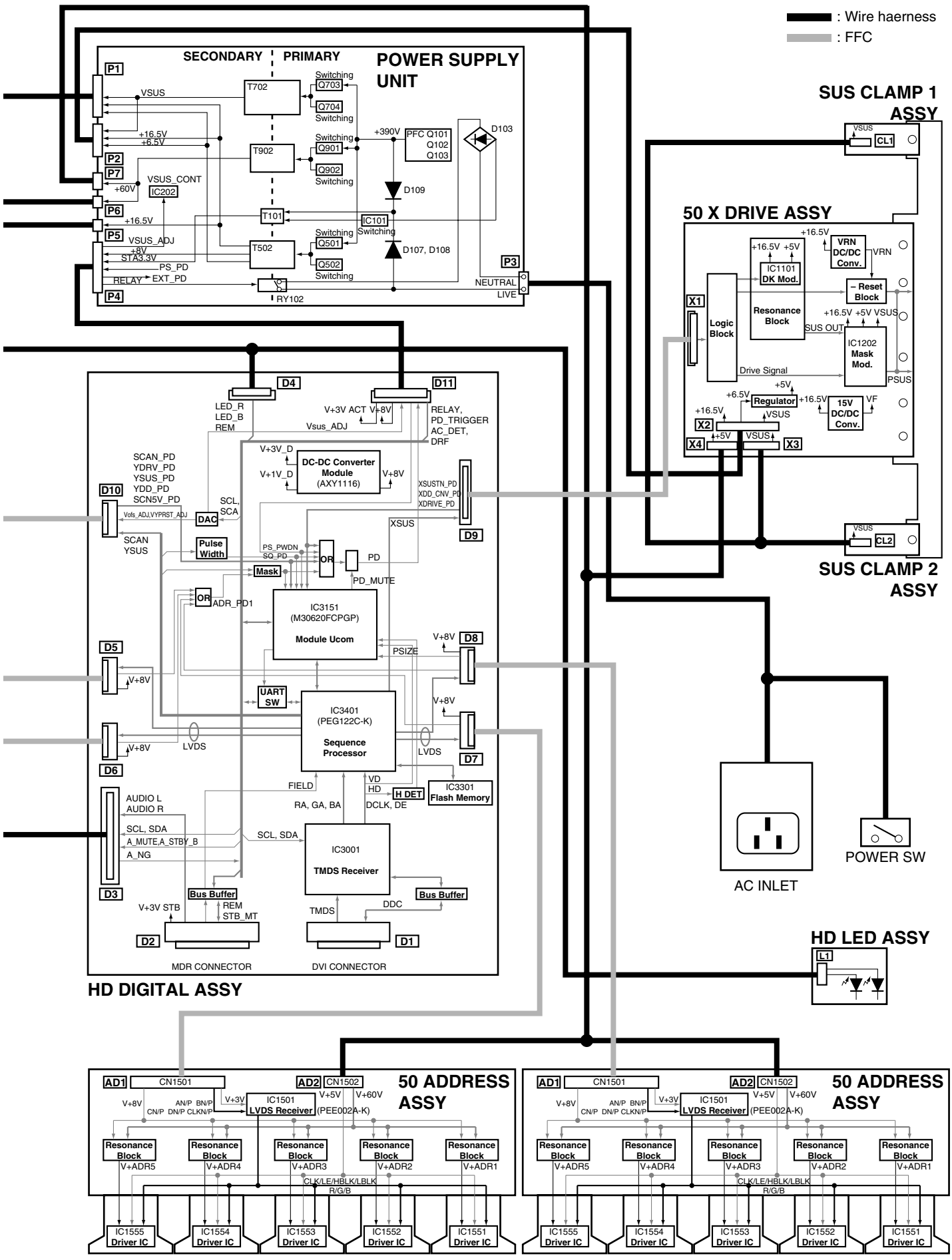
1. MR_ST_B	
2. MRXD	
3. P_ST_B	
4. STA3.3V	
5. AC_OFF	
6. GND_D	
7. REQ	
8. STP3.3V	
9. KEY_B	
10. MR_ST_B	
11. MTXD	
12. GND_D	
13. AUDIO_R	
14. REM_B	
15. STB_MT	
16. GND_D	
17. VIS	
18. FIELD	
19. GND_D	
20. AUDIO_L	

- When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

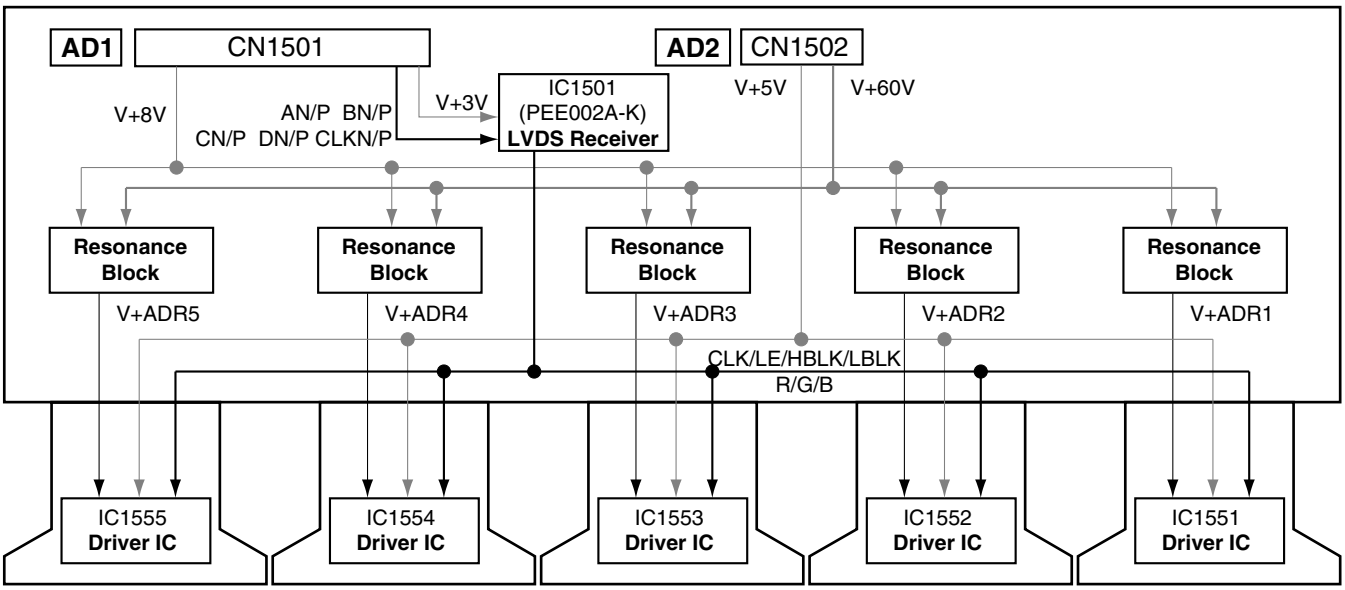


3.2 OVERALL BLOCK DIAGRAM

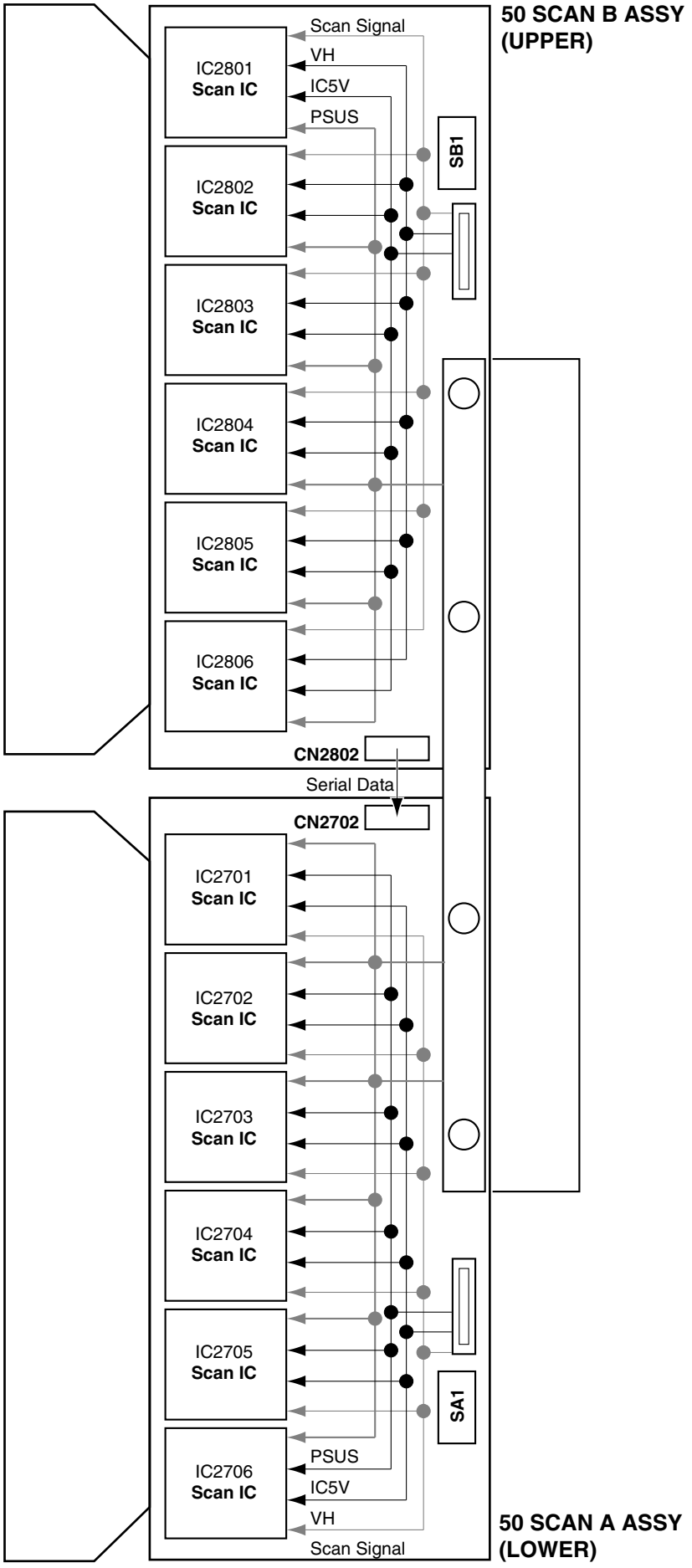



: Wire haerness
: FFC
POWER SUPPLY UNIT
SECONDARY
PRIMARY
P1
P2
P3
P4
P5
P6
P7
VSUS
+16.5V
+6.5V
+60V
VSUS_CONT
IC202
+16.5V
VSUS_ADJ
+8V
STA3.3V
PS_PD
RELAY
EXT_PD
RY102
T702
T902
T101
T502
Switching
Q703
Q704
Q901
Q902
Q501
Q502
+390V
PFC Q101
Q102
Q103
D103
D109
IC101
D107, D108
NEUTRAL
LIVE
SUS CLAMP 1 ASSY
CL1
50 X DRIVE ASSY
VRN DC/DC Conv.
VRN
IC1101 DK Mod.
– Reset Block
Resonance Block
Logic Block
X1
SUS OUT
IC1202 Mask Mod.
Drive Signal
PSUS
Regulator
15V DC/DC Conv.
VF
X2
X3
X4
SUS CLAMP 2 ASSY
CL2
D4
D11
LED_R
LED_B
REM
V+3V ACT
V+8V
Vsus_ADJ
RELAY,
PD_TRIGGER
AC_DET,
DRF
V+3V_D
V+1V_D
DC-DC Converter Module (AXY1116)
SCAN_PD
YDRV_PD
YSUS_PD
YDD_PD
SCN5V_PD
D10
Vofs_ADJ,VYPRST_ADJ
DAC
SCL,
SCA
SCAN
YSUS
Pulse Width
Mask
PS_PWDN
SQ_PD
OR
PD
PD_MUTE
ADR_PD1
XSUSTN_PD
XDD_CNV_PD
XDRIVE_PD
D9
XSUS
IC3151 (M30620FCPGP)
Module Ucom
D5
D8
PSIZE
UART SW
IC3401 (PEG122C-K)
Sequence Processor
D6
D7
LVDS
FIELD
VD
HD
H DET
IC3301 Flash Memory
RA, GA, BA
DCLK, DE
AUDIO L
AUDIO R
SCL, SDA
A_MUTE,A_STBY_B
A_NG
IC3001
TMDS Receiver
D3
Bus Buffer
V+3V STB
REM
STB_MT
TMDS
DDC
D2
D1
MDR CONNECTOR
DVI CONNECTOR
HD DIGITAL ASSY
AC INLET
POWER SW
HD LED ASSY
L1
AD1
CN1501
AD2
CN1502
50 ADDRESS ASSY
AN/P BN/P
CN/P DN/P CLKN/P
IC1501 LVDS Receiver (PEE002A-K)
V+3V
V+5V
V+60V
Resonance Block
V+ADR5
V+ADR4
V+ADR3
V+ADR2
V+ADR1
CLK/LE/HBLK/LBLK
R/G/B
IC1555 Driver IC
IC1554 Driver IC
IC1553 Driver IC
IC1552 Driver IC
IC1551 Driver IC

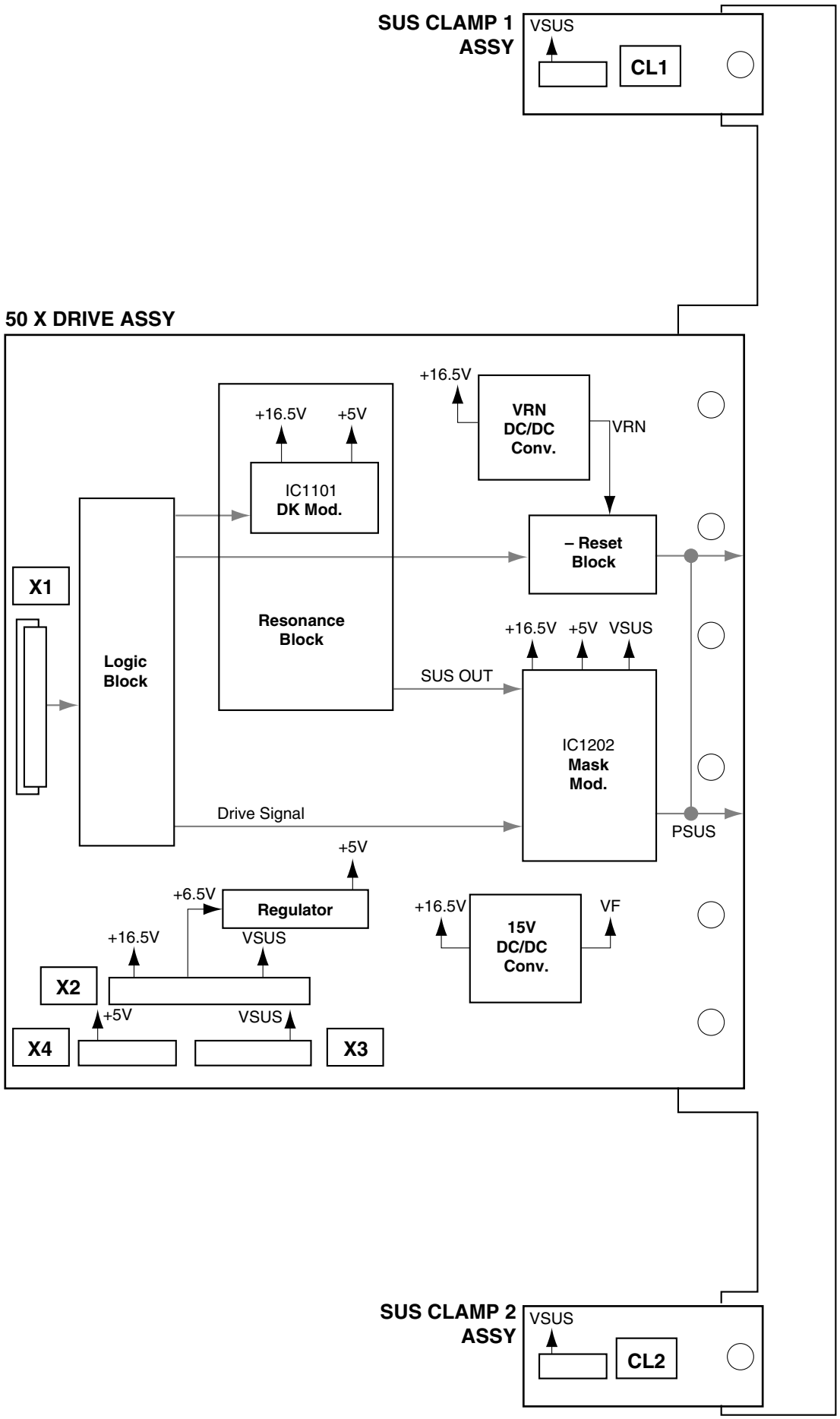
3.3 50 ADDRESS ASSY



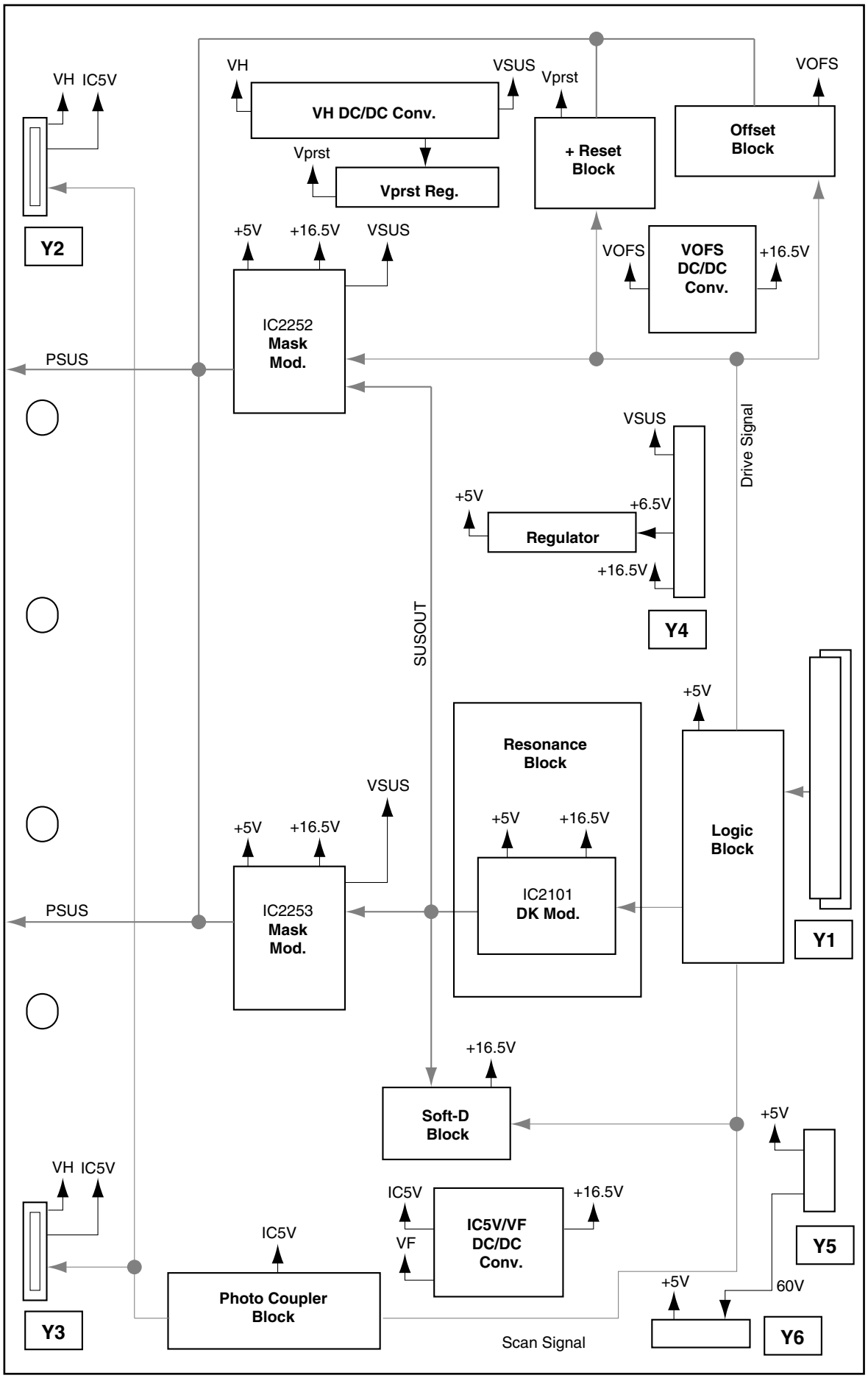
3.4 50 SCAN A and B ASSYS



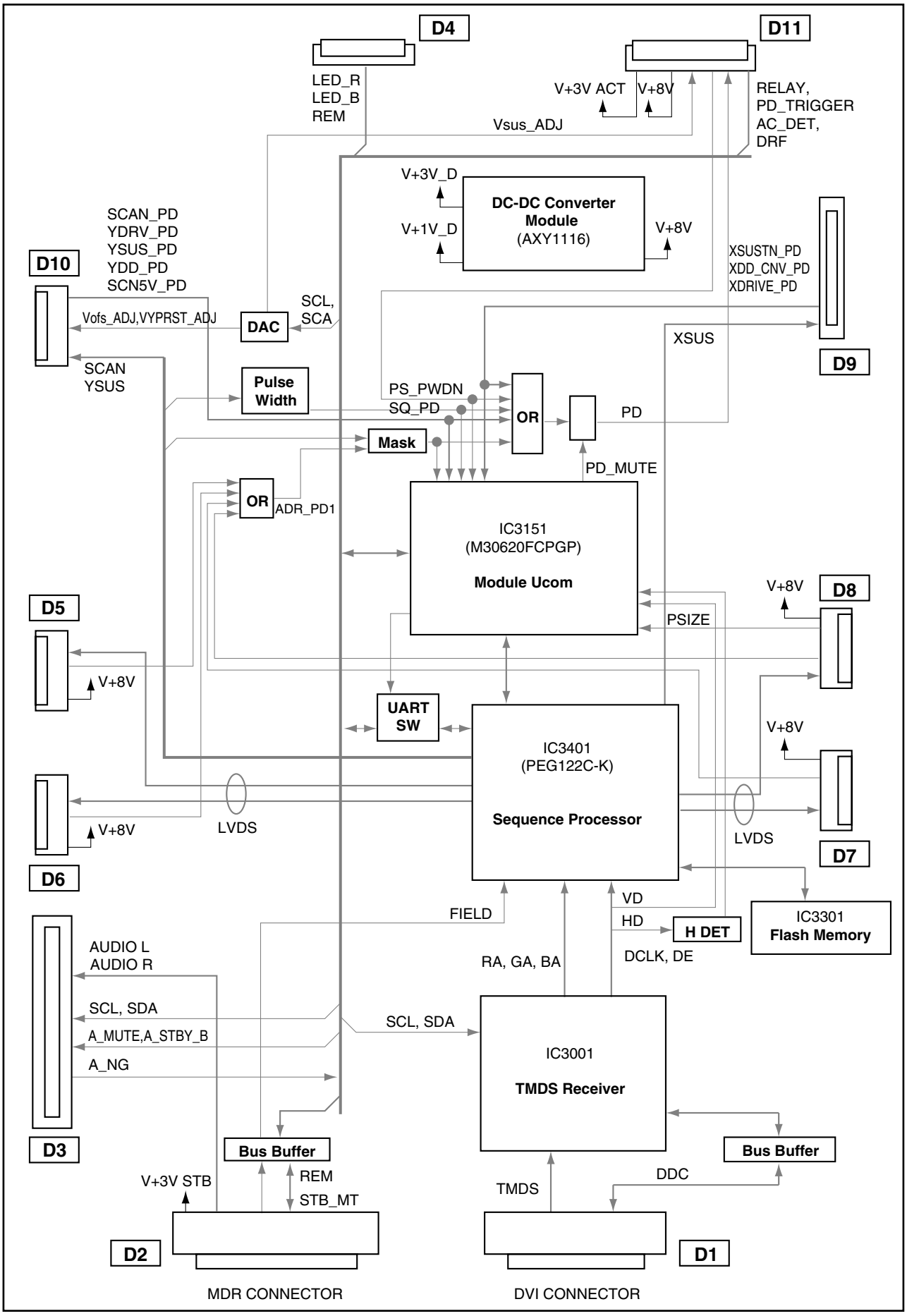
3.5 50 X DRIVE, SUS CLAMP 1 and SUS CLAMP 2 ASSYS



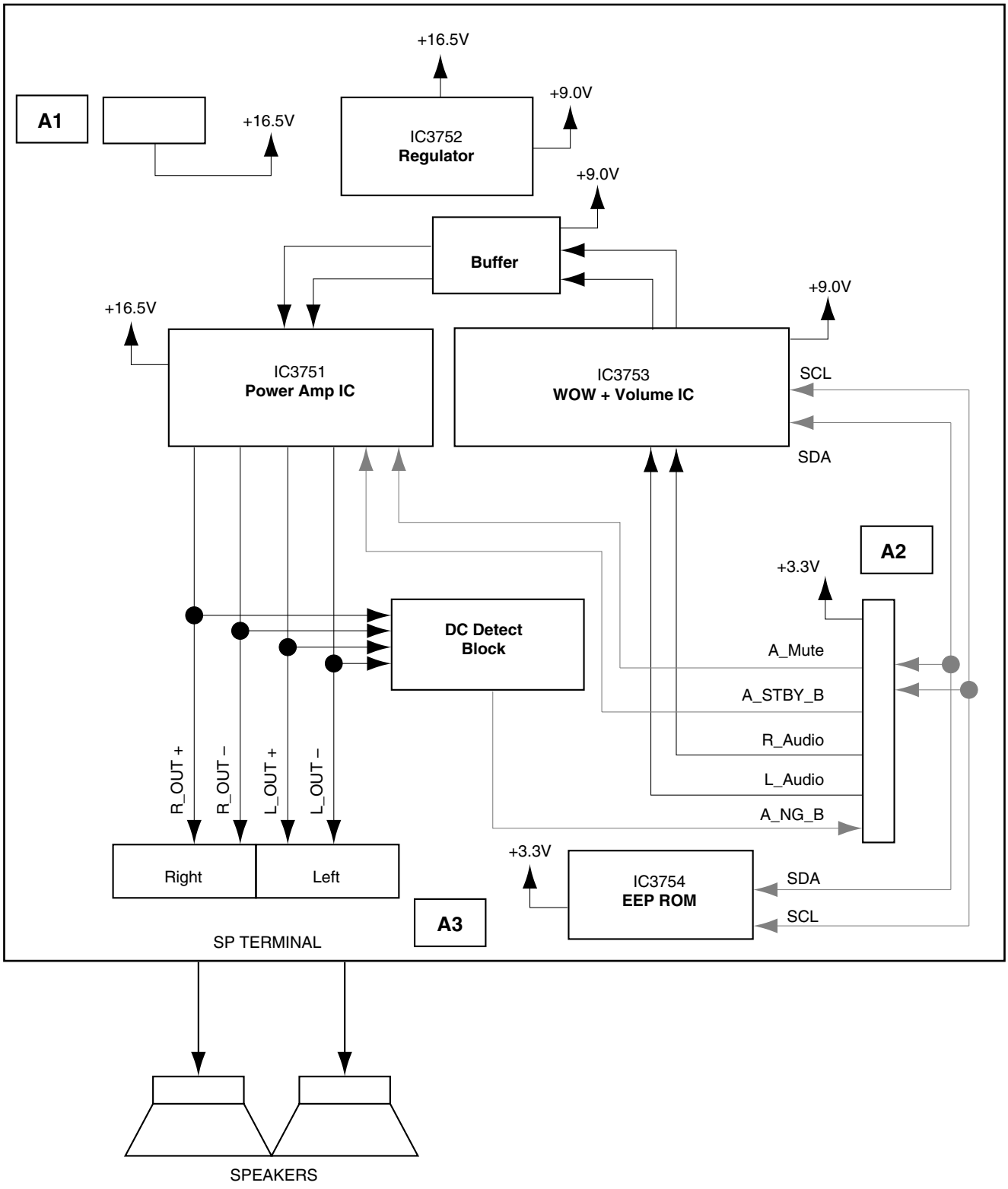
3.6 50 Y DRIVE ASSY



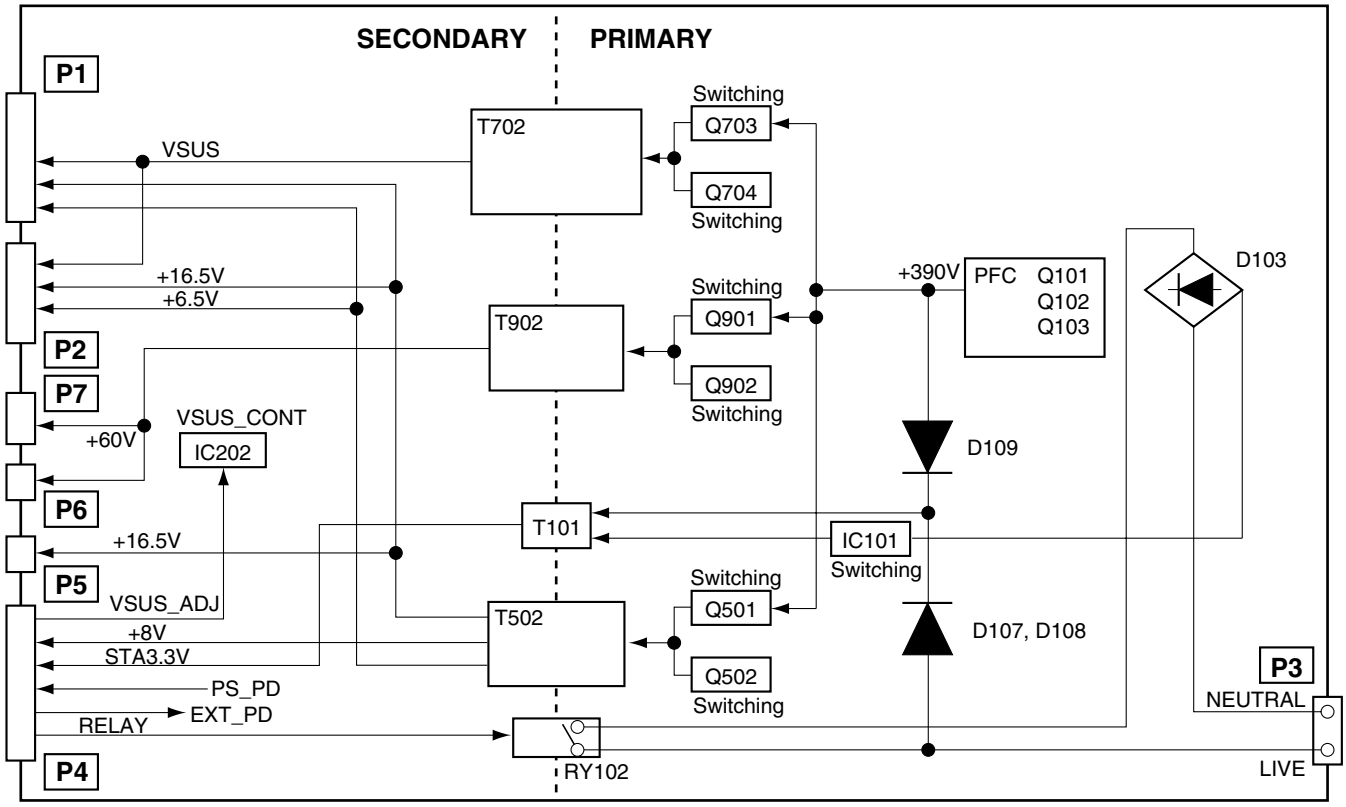
3.7 HD DIGITAL ASSY



3.8 HD AUDIO ASSY



3.9 POWER SUPPLY UNIT



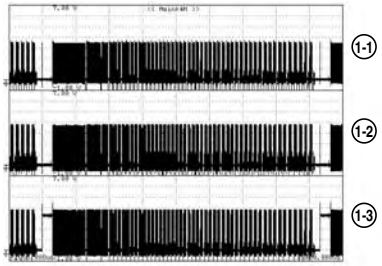
3.10 WAVEFORMS

Note : The encircled numbers denote measuring point in the schematic diagram.
Refer to service manual (ARP3268).

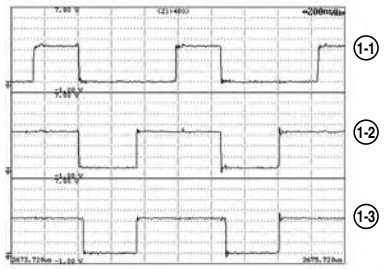
50 ADDRESS ASSY

50 ADDRESS RESONANCE BLOCK

① Control signal of resonance circuit (1 field)
Input : VIDEO 60Hz
Signal : Color-bar (MKSS17)
①-1 CH1 : ADR_B2
V : 1V/div H : 2msec/div
①-2 CH2 : ADR_U2
V : 1V/div H : 2msec/div
①-3 CH3 : ADR_D2
V : 1V/div H : 2msec/div

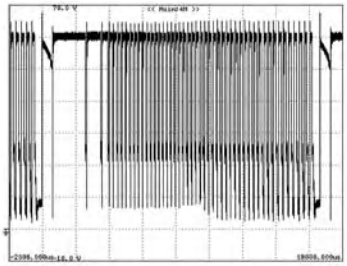


① Control signal of resonance circuit (2 FS)
Input : VIDEO 60Hz
Signal : Color-bar (MKSS17)
①-1 CH1 : ADR_B2
V : 1V/div H : 2msec/div
①-2 CH2 : ADR_U2
V : 1V/div H : 2msec/div
①-3 CH3 : ADR_D2
V : 1V/div H : 2msec/div

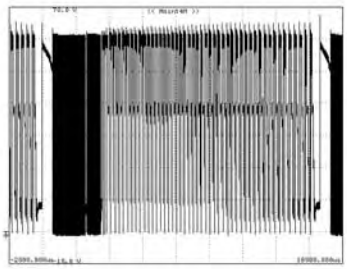


50 ADDRESS LOGIC BLOCK

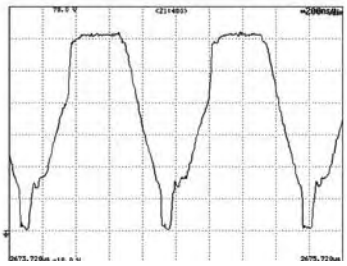
② VADR (1 field)
Input : VIDEO 60Hz
Signal : Color-bar (MKSS17)
CH2 : IC1555-pin 3 (VDD2)
V : 10V/div H : 2msec/div



② VADR (1 field)
Input : VIDEO 60Hz
Signal : Checkered pattern of Black-White (MKSS13)
CH2 : IC1555-pin 3 (VDD2)
V : 10V/div H : 2msec/div

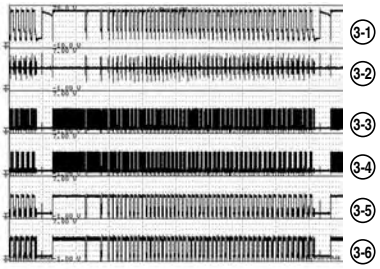


② VADR (2 FS)
Input : VIDEO 60Hz
Signal : Checkered pattern of Black-White (MKSS13)
CH2 : IC1555-pin 3 (VDD2)
V : 10V/div H : 200nsec/div

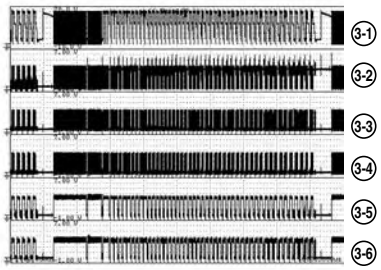


TCP LOGIC

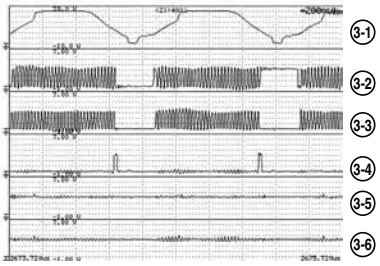
③ Incoming signal of TCP (1 field)
Input : VIDEO 60Hz
Signal : Color-bar (MKSS17)
③-1 CH1 : IC1555-pin 3 (VDD2)
V : 10V/div H : 2msec/div
③-2 CH2 : IC1555-pin 9 (A3)
V : 1V/div H : 2msec/div
③-3 CH3 : IC1555-pin 16 (CLK)
V : 1V/div H : 2msec/div
③-4 CH4 : IC1555-pin 14 (LE)
V : 1V/div H : 2msec/div
③-5 CH5 : IC1555-pin 19 (HBLK)
V : 1V/div H : 2msec/div
③-6 CH6 : IC1555-pin 17 (LBLK)
V : 1V/div H : 2msec/div



③ Incoming signal of TCP (1 field)
Input : VIDEO 60Hz
Signal : Checkered pattern of Black-White (MKSS13)
③-1 CH1 : IC1555-pin 3 (VDD2)
V : 10V/div H : 2msec/div
③-2 CH2 : IC1555-pin 9 (A3)
V : 1V/div H : 2msec/div
③-3 CH3 : IC1555-pin 16 (CLK)
V : 1V/div H : 2msec/div
③-4 CH4 : IC1555-pin 14 (LE)
V : 1V/div H : 2msec/div
③-5 CH5 : IC1555-pin 19 (HBLK)
V : 1V/div H : 2msec/div
③-6 CH6 : IC1555-pin 17 (LBLK)
V : 1V/div H : 2msec/div



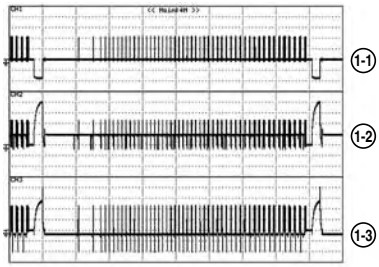
③ Incoming signal of TCP (Resonance part)
Input : VIDEO
Signal : Checkered pattern of Black-White (MKSS13)
③-1 CH1 : IC1555-pin 3 (VDD2)
V : 10V/div H : 200nsec/div
③-2 CH2 : IC1555-pin 9 (A3)
V : 1V/div H : 200nsec/div
③-3 CH3 : IC1555-pin 16 (CLK)
V : 1V/div H : 200nsec/div
③-4 CH4 : IC1555-pin 14 (LE)
V : 1V/div H : 200nsec/div
③-5 CH5 : IC1555-pin 19 (HBLK)
V : 1V/div H : 200nsec/div
③-6 CH6 : IC1555-pin 17 (LBLK)
V : 1V/div H : 200nsec/div



50 X DRIVE, 50 Y DRIVE ASSY

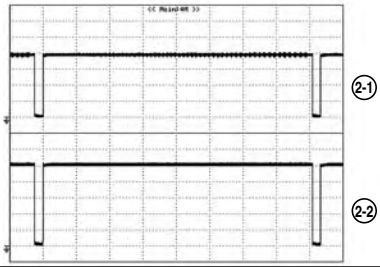
1 Drive output signal (1 field, Color-bar)

1-1 **CH1 : R1277 (XPSUS) - K1203 (SUSGND)**
V : 100V/div H : 2msec/div (X DRIVE Assy)
1-2 **CH2 : K2701 (SCANOUT) - K2330 (SUSGND)**
V : 100V/div H : 2msec/div (SCAN A Assy)
1-3 **CH3 : F2301 (YPSUS) - K2330 (SUSGND)**
V : 100V/div H : 2msec/div (Y DRIVE Assy)



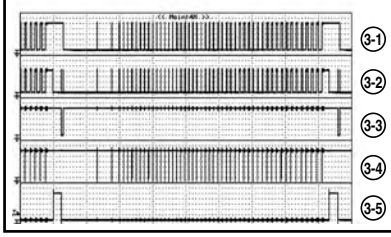
2 X Drive pulse control signal (Color-bar)

2-1 **CH1 : K1009 (XSUS-MSK) - K1001 (DGND)**
V : 1V/div H : 2msec/div (X DRIVE Assy)
2-2 **CH2 : K1005 (XNR-D) - K1001 (DGND)**
V : 1V/div H : 2msec/div (X DRIVE Assy)



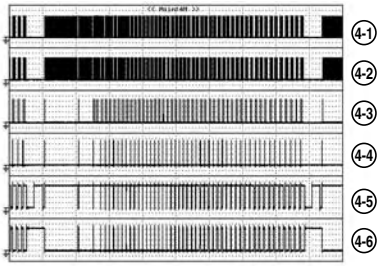
3 Y Drive pulse control signal (Color-bar)

3-1 **CH1 : K2007 (YNOFS) - K2002 (GND_D)**
V : 1V/div H : 2msec/div (Y DRIVE Assy)
3-2 **CH2 : K2005 (YSUS-MSK) - K2002 (GND_D)**
V : 1V/div H : 2msec/div (Y DRIVE Assy)
3-3 **CH3 : K2008 (YNRST) - K2002 (GND_D)**
V : 1V/div H : 2msec/div (Y DRIVE Assy)
3-4 **CH4 : K2006 (SOFT-D) - K2002 (GND_D)**
V : 1V/div H : 2msec/div (Y DRIVE Assy)
3-5 **CH5 : K2023 (YPR-U) - K2002 (GND_D)**
V : 1V/div H : 2msec/div (Y DRIVE Assy)



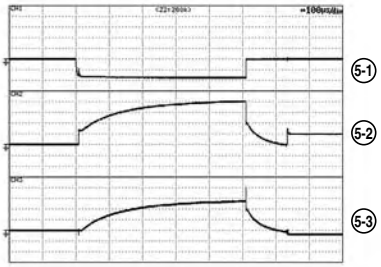
4 Scan control signal (1 field, Color-bar)

4-1 **CH1 : TP2001 (LE) - K2002 (GND-D)**
V : 1V/div H : 2msec/div (X DRIVE Assy)
4-2 **CH2 : TP2008 (CLK) - K2002 (GND-D)**
V : 1V/div H : 2msec/div (X DRIVE Assy)
4-3 **CH3 : TP2003 (SI-H) - K2002 (GND-D)**
V : 1V/div H : 2msec/div (X DRIVE Assy)
4-4 **CH4 : TP2004 (CLR) - K2002 (GND-D)**
V : 1V/div H : 2msec/div (X DRIVE Assy)
4-5 **CH5 : TP2005 (OC2) - K2002 (GND-D)**
V : 1V/div H : 2msec/div (X DRIVE Assy)
4-6 **CH6 : TP2006 (OC1) - K2002 (GND-D)**
V : 1V/div H : 2msec/div (X DRIVE Assy)



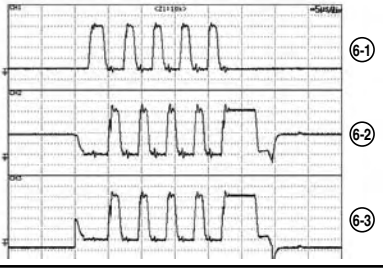
5 Reset pulse signal

5-1 **CH1 : R1277 (XPSUS) - K1203 (SUSGND)**
V : 100V/div H : 100µsec/div (X DRIVE Assy)
5-2 **CH2 : K2701 (SCANOUT) - K2330 (SUSGND)**
V : 100V/div H : 100µsec/div (SCAN A Assy)
5-3 **CH3 : F2301 (YPSUS) - K2330 (SUSGND)**
V : 100V/div H : 100µsec/div (Y DRIVE Assy)



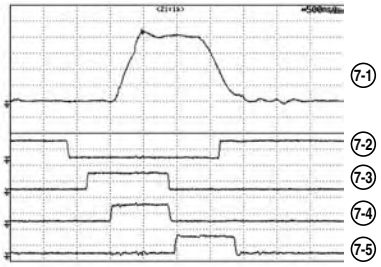
6 Sustain pulse signal (1 sub, sub field)

6-1 **CH1 : R1277 (XPSUS) - K1203 (SUSGND)**
V : 50V/div H : 5µsec/div (X DRIVE Assy)
6-2 **CH2 : K2701 (SCANOUT) - K2330 (SUSGND)**
V : 50V/div H : 5µsec/div (SCAN A Assy)
6-3 **CH3 : F2301 (YPSUS) - K2330 (SUSGND)**
V : 50V/div H : 5µsec/div (Y DRIVE Assy)



7 Sustain signal

7-1 **CH1 : F2301 (YPSUS) - K2330 (SUSGND)**
V : 50V/div H : 500nsec/div (Y DRIVE Assy)
7-2 **CH2 : K2004 (YSUS-G) - K2002 (DGND)**
V : 5V/div H : 500nsec/div (Y DRIVE Assy)
7-3 **CH3 : K2011 (YSUS-U) - K2002 (DGND)**
V : 5V/div H : 500nsec/div (Y DRIVE Assy)
7-4 **CH4 : K2009 (YSUS-B) - K2002 (DGND)**
V : 5V/div H : 500nsec/div (Y DRIVE Assy)
7-5 **CH5 : K2010 (YSUS-D) - K2002 (DGND)**
V : 5V/div H : 500nsec/div (Y DRIVE Assy)



5. PCB PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω → 56 x 10^1 → 561 ..... RD1/4PU 5 6 1 J
47k Ω → 47 x 10^3 → 473 ..... RD1/4PU 4 7 3 J
0.5 Ω → R50 ..... RN2H R 5 0 K
1 Ω → 1R0 ..... RS1P 1 R 0 K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562 x 10^1 → 5621 ..... RN1/4PC 5 6 2 1 F

■ LIST OF WHOLE PCB ASSEMBLIES

Mark	Symbol and Description	PDP-506PE /WYVI	PDP-506PU /KUCXC
NSP	1..PANEL CHASSIS (506) ASSY	AWU1143	AWU1143
NSP	2..50 ADDRESS ASSY	AWV2208	AWV2208
NSP	2..50 SCAN ASSY	AWV2211	AWV2211
NSP	3..50 SCAN A ASSY	AWW1026	AWW1026
NSP	3..50 SCAN B ASSY	AWW1027	AWW1027
NSP	1..50 X DRIVE ASSY	AWV2257	AWV2209 or AWV2257
	2..50 X DRIVE ASSY	AWW1075	AWW1020 or AWW1075
	2..SUS CLAMP 1 ASSY	AWW1022	AWW1022
	2..SUS CLAMP 2 ASSY	AWW1023	AWW1023
	1..50 Y DRIVE ASSY	AWV2258	AWV2210 or AWV2258
NSP	1..HD DIGITAL ASSY	AWV2202	AWV2202
	2..HD DIGITAL ASSY	AWW1028	AWW1028
	2..HD LED ASSY	AWW1029	AWW1029
	2..HD IR ASSY	AWW1030	AWW1030
	1..HD AUDIO ASSY	AWV2203	AWV2203
⚠	1..POWER SUPPLY UNIT	AXY1112	AXY1112

50 X DRIVE ASSY

AWW1075 and AWW1020 are constructed the same except for the following :

Mark	Symbol and Description	AWW1075	AWW1020
	IC1101	AXF1142	AXF1155
	C1101	ACG1112 (0.22U/250V)	ACG1088 (0.1U/250V)
	C1106-C1110	Not used	ACE1178
	C1112, C1113 (0.22U/250V)	ACG1112	Not used
	C1161-C1164, C1166	ACE1168	Not used
	C1297, C1298 (3300p/630V)	ACG1129	Not used

50 Y DRIVE ASSY

AWV2258 and AWV2210 are constructed the same except for the following :

Mark	Symbol and Description	AWV2258	AWV2210
	IC2101	AXF1142	AXF1155
	C2103	ACG1112 (0.22U/250V)	ACG1088 (0.1U/250V)
	C2107, C2108 (0.22U/250V)	ACG1112	Not used
	C2131-C2134, C2136	ACE1168	ACE1178
	C2271	ACG1124 (0.1U/100V)	ACG1118 (0.33U/100V)
	C2272 (0.1U/100V)	ACG1124	Not used

■ PCB PARTS LIST FOR PDP-506PE/WYVI UNLESS OTHER WISE NOTED

Mark	No.	Description	Part No.
		50 ADDRESS ASSY	
		[50 ADR LOGIC BLOCK]	
		SEMICONDUCTORS	
	IC1501		PEE002A
		COILS AND FILTERS	
	L1504	CHIP SOLID INDUCTOR	QTL1013
		CAPACITORS	
	C1501,C1502		CKSRYB105K6R3
	C1509,C1510		CKSSYB102K50
	C1503-C1507,C1551-C1555		CKSSYF104Z16
		RESISTORS	
	R1530,R1531		RS1/16S0R0J
	R1505-R1509		RS1/16SS1000F
	Other Resistors		RS1/16SS###J
		OTHERS	
	CN1501	40P CONNECTOR	AKM1217
	CN1502	PH CONNECTOR 4P	AKM1290
		[50 ADR RESONANCE BLOCK]	
		SEMICONDUCTORS	
	IC1601,IC1602		TND307TD
	Q1613		2SA1163
	Q1614-Q1616		HAT1110R
	Q1606,Q1608,Q1611		QSZ2
	Q1612		RN1901
	Q1601-Q1605		SP8M41
	D1612		1SS302
	D1625-D1629		1SS355
	D1631-D1650		EP05FA20
	D1601,D1605,D1607,D1610,D1613		UDZS15(B)
	D1616,D1620,D1622		UDZS15(B)
		COILS AND FILTERS	
	L1601-L1605	SMD COIL	ATH1163
		CAPACITORS	
	C1609 (0.1U/100V)		ACG1098
	C1601,C1606,C1610 (0.068U/100V)		ACG1123
	C1611,C1614 (0.068U/100V)		ACG1123
	C1602-C1605 (56UF/80V)		ACH1405
	C1613		CKSRYB104K25
	C1619		CKSYB105K16
		RESISTORS	
	R1606,R1611,R1613,R1621		RS1/16SS###J
	Other Resistors		RS1/16S###J
		50 SCAN A ASSY	
		SEMICONDUCTORS	
	IC2701-IC2706		AN16025A
	D2701-D2707		1SS355
		CAPACITORS	
	C2701,C2711,C2721 (0.1U/250V)		ACG1088
	C2731,C2741,C2751 (0.1U/250V)		ACG1088
	C2710,C2720,C2730,C2740,C2750		CCSRCH181J50
	C2760		CCSRCH181J50
	C2708,C2709,C2718,C2719		CCSRCH331J50
	C2728,C2729,C2738,C2739		CCSRCH331J50
	C2748,C2749,C2758,C2759		CCSRCH331J50
	C2705-C2707,C2715-C2717		CCSRCH390J50
	C2725-C2727,C2735-C2737		CCSRCH390J50
	C2745-C2747,C2755-C2757		CCSRCH390J50
	C2703,C2713,C2723,C2733,C2743		CKSRYB105K6R3
	C2753		CKSRYB105K6R3
		RESISTORS	
	R2705,R2710,R2713,R2716,R2719		RAB4C221J
	R2722		RAB4C221J
	Other Resistors		RS1/16S###J
		OTHERS	
	CN2702	PH CONNECTOR 3P	AKM1274
	CN2701	13P BRIDGE CONNECTOR	AKP1261
		50 SCAN B ASSY	
		SEMICONDUCTORS	
	IC2801-IC2806		AN16025A
	IC2807		TC7SH08FUS1
	D2801-D2807		1SS355
		CAPACITORS	
	C2801,C2811,C2821 (0.1U/250V)		ACG1088
	C2831,C2841,C2851 (0.1U/250V)		ACG1088
	C2810,C2820,C2830,C2840,C2850		CCSRCH181J50
	C2860		CCSRCH181J50
	C2808,C2809,C2818,C2819		CCSRCH331J50
	C2828,C2829,C2838,C2839		CCSRCH331J50
	C2848,C2849,C2858,C2859		CCSRCH331J50
	C2805-C2807,C2815-C2817		CCSRCH390J50
	C2825-C2827,C2835-C2837		CCSRCH390J50
	C2845-C2847,C2855-C2857		CCSRCH390J50
	C2803,C2813,C2823,C2833,C2843		CKSRYB105K6R3
	C2853,C2861		CKSRYB105K6R3
		RESISTORS	
	R2803,R2808,R2811,R2814,R2817		RAB4C221J
	R2820		RAB4C221J
	Other Resistors		RS1/16S###J
		OTHERS	
	CN2802	PH CONNECTOR 3P	AKM1274
	CN2801	13P BRIDGE CONNECTOR	AKP1261
		50 X DRIVE ASSY	
		[50X LOGIC BLOCK]	
		SEMICONDUCTORS	
	IC1001		TC74ACT541FT
	IC1002		TC74VHC00FTS1

Mark No.	Description	Part No.
CAPACITORS		
C1003		CEHAT470M16
C1001,C1002		CKSRYB104K16
RESISTORS		
R1001,R1003		RAB4C470J
R1008,R1009		RAB4C472J
Other Resistors		RS1/16S###J
OTHERS		
CN1001	18P FFC CONNECTOR	VKN1310
[50X RESONANCE BLOCK]		
SEMICONDUCTORS		
IC1101		AXF1142
IC1141		BA10393F
Q1141		2SC4116
D1101-D1105		D1FL40
COILS AND FILTERS		
L1103,L1104	CHOKE COIL	ATH1119
L1101,L1102	CHOKE COIL	ATH1187
L1105,L1106	CHOKE COIL	ATH1187
CAPACITORS		
C1161-C1164,C1116 (3.3U/250V)		ACE1168
C1101,C1112,C1113 (0.22U/250V)		ACG1112
C1121 (470p/630V)		ACG1126
C1105		CCG1186
C1141,C1142,C1144,C1145		CKSRYB104K16
C1102,C1146		CKSRYB105K6R3
C1103		CKSYB105K25
RESISTORS		
R1101		ACN1168
R1142,R1146		RS1/10S1003F
R1122,R1123		RS1/10S104J
R1148,R1150		RS1/16S5601F
R1151,R1155		RS1/16S6801F
R1106,R1121		RS2MMF100J
Other Resistors		RS1/16S###J
[50X SUS BLOCK]		
SEMICONDUCTORS		
IC1202		AXF1140
IC1201		MM1565AF
IC1252		PS9117
IC1251		TND301S
IC1271		TND307TD
Q1251		2SC2412K
Q1272		2SK3325-Z
D1281		1SS302
D1201		1SS355
D1252		CRH01
D1282		UDZS16(B)
D1251		UDZS5R6(B)
COILS AND FILTERS		
L1204,L1211	INDUCTOR	ATH1186
F1201	INDUCTOR	CTF1449
L1201,L1205,L1231		LFEA100J

Mark No.	Description	Part No.
CAPACITORS		
C1214-C1217		ACE1178
C1212,C1213		ACH1423
C1231		CEHAT101M10
C1206		CEHAT101M25
C1283		CEHAT2R2M2E
C1208		CEHAT470M16
C1222,C1272		CEHAT470M25
C1221		CKSRYB105K6R3
C1204,C1207,C1223,C1251,C1253		CKSRYF104Z50
C1273		CKSRYF104Z50
C1220		CKSYB105K25
RESISTORS		
R1204		ACN1166
R1213		ACN1168
R1276,R1277		RS3LMF470J
Other Resistors		RS1/16S###J
OTHERS		
KN1201-KN1206	GROUND PLATE	ANK-142
KN1208-KN1211	GROUND PLATE	ANK-142
CN1202	6P TOP POST	B6B-EH
CN1201	8P TOP POST	B8B-EH
[50X D-D CON BLOCK]		
SEMICONDUCTORS		
IC1321		PS2701A-1(L)
IC1326		TA76431FR
Q1324		2SA1037K
Q1302		2SC4081
Q1301,Q1323		2SD1898
Q1321,Q1325,Q1351		HN1C01FU
D1303,D1324		1SS301
D1304,D1307,D1325,D1328		1SS355
D1301,D1302,D1326,D1327		CRH01
D1321		D1FK60
D1329,D1330		UDZS4R7(B)
D1306,D1323,D1331		UDZS5R1(B)
COILS AND FILTERS		
⚠T1301	SWITCHING TRANS.	ATK1159
⚠T1321	SWITCHING TRANS.	ATK1160
CAPACITORS		
C1325		ACH1428
C1326		CEHAT100M50
C1302,C1321		CEHAT101M25
C1301,C1303,C1323		CKSRYB103K50
C1304,C1306,C1327		CKSRYB104K16
C1307,C1324		CKSYB105K25
RESISTORS		
R1337		RAB4C472J
R1321,R1322,R1326,R1339		RS1/10S224J
VR1321		CCP1392
Other Resistors		RS1/16S###J

Mark No.	Description	Part No.
SUS CLAMP 1 ASSY		
SEMICONDUCTORS		
D1631		DF20L60U
CAPACITORS		
C1632		ACE1179
OTHERS		
KN1632	GROUND PLATE	ANK-142
CN1631	3P TOP POST	B3B-EH
KN1631	WRAPPING TERMINAL	VNF1084
SUS CLAMP 2 ASSY		
SEMICONDUCTORS		
D1641		DF20L60U
CAPACITORS		
C1642		ACE1179
OTHERS		
KN1642	GROUND PLATE	ANK-142
CN1641	3P TOP POST	B3B-EH
KN1641	WRAPPING TERMINAL	VNF1084
50 Y DRIVE ASSY		
[50Y LOGIC BLOCK]		
SEMICONDUCTORS		
IC2002		TC74ACT540FT
IC2001,IC2004		TC74ACT541FT
IC2003,IC2005		TC74VHC08FTS1
CAPACITORS		
C2003		CEHAT470M16
C2001,C2002,C2004-C2006		CKSSYB104K10
RESISTORS		
R2003,R2006		RAB4C101J
R2001,R2002,R2017,R2021		RAB4C470J
R2004,R2005,R2019,R2020		RAB4C472J
Other Resistors		RS1/16S###J
OTHERS		
CN2001	40P CONNECTOR	AKM1217
[50Y RESONANCE BLOCK]		
SEMICONDUCTORS		
IC2101		AXF1142
IC2141		BA10393F
Q2141		2SC4081
D2101-D2105		D1FL40
COILS AND FILTERS		
L2103,L2104	CHOKE COIL	ATH1119
L2101,L2102	CHOKE COIL	ATH1187
L2105,L2106	CHOKE COIL	ATH1187
CAPACITORS		
C2131-C2134,C2136 (3.3U/250V)		ACE1168
C2103,C2107,C2108 (0.22U/250V)		ACG1112
C2104 (470p/630V)		ACG1126
C2106		CCG1186
C2101,C2145		CKSRYB105K6R3
C2141,C2143,C2144		CKSSYB104K10
C2102		CKSYB105K25
RESISTORS		
R2101		ACN1174
R2142,R2143		RS1/10S1003F
R2103,R2107		RS1/10S104J
R2146,R2149		RS1/16S5601F
R2147,R2151		RS1/16S6801F
R2102		RS2MMF100J
R2108		RS3LMF100J
Other Resistors		RS1/16S###J
[50Y SUS BLOCK]		
SEMICONDUCTORS		
IC2252,IC2253		AXF1141
IC2350		MM1565AF
IC2250		PS9117
IC2231,IC2251		TND301S
IC2203,IC2221		TND307TD
Q2202		2SA2142
Q2250		2SC4081
Q2290		2SK3050
Q2221		2SK3325-Z
Q2280,Q2281		2SK3399
D2233		1SS301
D2213		1SS302
D2203,D2212,D2351		1SS355
D2202,D2204,D2205,D2234		CRH01
D2251,D2252,D2272		CRH01
D2211		D1FK60
D2232,D2271		UDZS16(B)
D2250		UDZS5R6(B)
COILS AND FILTERS		
L2353	INDUCTOR	ATH1186
F2301-F2320	FERRITE BEAD	ATX1055
F2352	INDUCTOR	CTF1449
L2350,L2351,L2354		LFEA100J
CAPACITORS		
C2330,C2335,C2341,C2342		ACE1178
C2231 (0.33U/100V)		ACG1118
C2271,C2272 (0.1U/100V)		ACG1124
C2336,C2337		ACH1423
C2270		ACH1426
C2226		ACH1427
C2207		CCSRCH102J50
C2355,C2369		CEHAT101M10
C2357		CEHAT470M16
C2208,C2221,C2339,C2364		CEHAT470M25
C2356		CKSRYB104K16
C2353,C2358,C2359		CKSRYB105K6R3
C2363		CKSRYB473K16
C2209,C2222,C2230,C2252		CKSRYF104Z50
C2250		CKSSYB104K10
C2354,C2360		CKSYB105K25

Mark No.	Description	Part No.
RESISTORS		
R2352		ACN1166
R2304		ACN1174
R2360,R2362		ACN1178
R2277-R2279,R2281		ACN1241
R2210,R2211		RS1/10S151J
R2290		RS1MMF331J
R2222,R2224		RS2MMF5R6J
R2203		RS3LMF821J
Other Resistors		RS1/16S###J
OTHERS		
KN2350,KN2352	GROUND PLATE	ANK-142
KN2354	GROUND PLATE	ANK-142
KN2356,KN2357	GROUND PLATE	ANK-142
KN2359-KN2363	GROUND PLATE	ANK-142
CN2351,CN2352	KR CONNECTOR	B4B-PH-K
CN2350	9P TOP POST	B9B-EH
[50Y SCAN BLOCK]		
SEMICONDUCTORS		
IC2403,IC2405,IC2406,IC2408		PS9117
IC2401		PS9851-2(P)
IC2402,IC2407		TC74ACT540FT
COILS AND FILTERS		
L2401-L2403		LFEA100J
CAPACITORS		
C2404,C2411		ACH1413
C2401,C2407,C2414		CEHAT101M10
C2402,C2403,C2405,C2408-C2410		CKSSYB104K10
C2412		CKSSYB104K10
RESISTORS		
R2407,R2421		RAB4C220J
R2402,R2409		RS1/10S0R0J
Other Resistors		RS1/16S###J
OTHERS		
CN2401	15P BRIDGE CONNECTOR	AKM1200
CN2402	15P BRIDGE CONNECTOR	AKM1200
[50Y VH D-D CON BLOCK]		
SEMICONDUCTORS		
IC2531		BA10358F
IC2502		MIP2E3DMC
IC2503		PS2701A-1(L)
IC2534,IC2535		TA76431FR
Q2533		2SC2412K
Q2531		2SC3425
Q2532		2SD2568
Q2511		HN1C01FU
D2534		1SS355
D2522,D2524		CRH01
D2523,D2532		D1FK60
D2533		UDZS33(B)
D2536		UDZS4R7(B)
D2530,D2531		UDZS8R2(B)
COILS AND FILTERS		
⚠T2503	CONVERTER TRANS.	ATK1158
L2501		LFEA101J

Mark No.	Description	Part No.
CAPACITORS		
C2531		ACE1177
C2516		ACH1360
C2532		ACH1425
C2513		ACH1428
C2520		CEHAT101M16
C2515		CEHAT101M25
C2528		CEHAT221M16
C2514,C2525,C2534		CKSRYB104K16
C2521,C2533,C2535		CKSRYB104K25
RESISTORS		
R2553		RAB4C472J
R2558		RS1/10S0R0J
R2533,R2556		RS1/10S104J
R2534,R2535,R2541		RS1/10S2203F
R2548		RS1/16S1003F
R2550		RS1/16S1802F
R2549,R2557		RS1/16S4702F
R2542,R2545		RS1/16S5601F
VR2503		CCP1390
VR2531		CCP1392
Other Resistors		RS1/16S###J
[50Y D-D CON BLOCK]		
SEMICONDUCTORS		
IC2602		BA10358F
IC2601,IC2603,IC2606		PS2701A-1(L)
IC2605,IC2614		TA76431FR
Q2610		2SA1163
Q2601,Q2609		2SA1576A
Q2608		2SA2005
Q2607		2SC2713
Q2612		2SC4081
Q2605,Q2606		2SD1898
Q2603,Q2604,Q2611		DTC143EUA
Q2602,Q2613,Q2641		HN1C01FU
D2611		1SS226
D2604,D2612		1SS301
D2602,D2613-D2615		1SS355
D2601,D2603,D2609,D2618		CRH01
D2610		D1FL40
D2617		UDZS15(B)
D2607,D2608		UDZS4R7(B)
D2605		UDZS5R1(B)
D2616		UDZS5R6(B)
COILS AND FILTERS		
⚠T2602	CONVERTER TRANS.	ATK1156
⚠T2601	SWITCHING TRANS.	ATK1161
CAPACITORS		
C2608,C2610		CEHAT101M25
C2613		CEHAT221M25
C2606		CEHAT221M6R3
C2607		CKSRYB102K50
C2605,C2612,C2614		CKSRYB103K50
C2601,C2604,C2609		CKSRYB104K16
C2602,C2615		CKSRYB105K6R3
C2603		CKSRYF104Z50
C2611		CKSSYB104K10

Mark No.	Description	Part No.
	RESISTORS	
	R2613	RAB4C472J
	R2641,R2642	RS1/10S224J
A	R2629	RS1/16S1002F
	R2625,R2626	RS1/16S1501F
	R2608,R2612,R2630,R2632,R2635	RS1/16S4701F
	R2618	RS1/16S4702F
	R2636	RS1/16S5601F
	R2652	RS1/16S6801F
	R2627	RS3LMF151J
	VR2601	CCP1390
	Other Resistors	RS1/16S###J
B		
	HD DIGITAL ASSY	
	OTHERS	
	DD CON UNIT	AXY1116
	REMOTE RECEIVER UNIT	RPM7240-H4
	HD DIGITAL ASSY	
	[TMDS RX BLOCK]	
	SEMICONDUCTORS	
	IC3002	BA8274F
C	IC3001	SII1169CTU
	IC3004	SN74AHC32PW
	Q3009	2SC4081
	Q3007	DTA143EUA
	Q3004	DTC124EUA
	Q3005	DTC143EUA
	Q3002,Q3006,Q3008	RN1901
	Q3003	RN2901
	D3001,D3002	1SS355
	D3012	DA204U
	D3007-D3011	RB751V-40
D	D3003	UDZS6R8(B)
	COILS AND FILTERS	
	F3005 CHIP SOLID INDUCTOR	QTL1011
	L3003 CHIP SOLID INDUCTOR	QTL1013
	CAPACITORS	
	C3030	ACH1357
	C3034,C3036,C3038,C3040,C3042	ACH1396
	C3003,C3005,C3009,C3014,C3019	CCSRCH331J50
	C3046	CCSRCH470J50
	C3044,C3045	CCSSCH101J50
E	C3001,C3008,C3011,C3020,C3022	CCSSCH820J50
	C3025-C3027	CCSSCH820J50
	C3018,C3021,C3023,C3024	CKSRYF105Z10
	C3015-C3017,C3028,C3029	CKSSYF104Z16
	C3031,C3032,C3035,C3037,C3039	CKSSYF104Z16
	C3041,C3043	CKSSYF104Z16
	RESISTORS	
	R3007	RAB4C220J
	R3008-R3013	RAB4C470J
	R3018	RAB4C472J
F	R3021	RS1/16S3900F
	Other Resistors	RS1/16S###J

Mark No.	Description	Part No.
	OTHERS	
	CN3003 PH CONNECTOR 6P	AKM1277
	CN3004 PH CONNECTOR 12P	AKM1298
	JA3001 DVI CONNECTOR	AKP1276
	JA3002 MDR CONNECTOR	AKP1277
	[MODULE UCOM BLOCK]	
	SEMICONDUCTORS	
	IC3156	BR24L04FJ-W
	IC3151	M30620FCPGP-U5C
	IC3157	M62334FP
	IC3158	MM1522XU
	IC3155	SN74AHC08PW
	IC3152,IC3153	SN74AHC541PW
	IC3160	TC74VHC123AFTS1
	IC3159	TC7W126FU
	Q3151	2SJ461A
	D3156,D3159,D3161-D3163	1SS355
	D3151,D3152,D3154,D3155,D3158	DAN202U
	CAPACITORS	
	C3151	ACH1357
	C3164	CCSSCH101J50
	C3171,C3172,C3180	CKSRYB105K6R3
	C3154	CKSSYB102K50
	C3152,C3153,C3155-C3158	CKSSYF104Z16
	C3160-C3163,C3165,C3166,C3170	CKSSYF104Z16
	RESISTORS	
	R3160,R3171,R3176	RAB4C101J
	R3174	RAB4C103J
	Other Resistors	RS1/16S###J
	OTHERS	
	⚠X3151 CERAMIC RESONATOR	ASS1178
	[PANEL FLASH BLOCK]	
	SEMICONDUCTORS	
	IC3301	MBM29PL160TD75TN
	IC3304	PST3610UR
	IC3302,IC3305	PST3628UR
	IC3303	SN74AHC08PW
	Q3302	HN1C01FU
	Q3301	RN1901
	CAPACITORS	
	C3311	CCSRCH470J50
	C3317	CCSRCH471J50
	C3304,C3307,C3309	CKSRYB472K50
	C3305,C3310	CKSSYB102K50
	C3315	CKSSYB104K10
	C3301-C3303,C3306,C3308,C3316	CKSSYF104Z16
	RESISTORS	
	All Resistors	RS1/16S###J
	OTHERS	
	⚠X3302 CRYSTAL OSCILLATOR	ASS1188

Mark No.	Description	Part No.
[SQ ASIC BLOCK]		
SEMICONDUCTORS		
IC3401		PEG122C
COILS AND FILTERS		
F3401,F3402	EMI FILTER	CCG1162
L3401-L3403	CHIP SOLID INDUCTOR	QTL1013
CAPACITORS		
C3402,C3419 (100UF/6.3V)		ACH1396
C3425,C3441 (100UF/6.3V)		ACH1396
C3414-C3416,C3426-C3438		CKSRYF105Z10
C3403-C3410,C3412,C3413		CKSSYF104Z16
C3417,C3418,C3420-C3424		CKSSYF104Z16
C3439,C3440,C3442-C3449		CKSSYF104Z16
RESISTORS		
R3402,R3412		RAB4C101J
R3405-R3407,R3409,R3410		RAB4C220J
R3416,R3417		RAB4C220J
R3425		RS1/16S5601F
Other Resistors		RS1/16S###J
[ADDRESS BLOCK]		
SEMICONDUCTORS		
D3501,D3502		DAN202U
CAPACITORS		
C3501-C3504		CKSSYB102K50
RESISTORS		
R3521,R3522,R3525		RAB4C101J
R3524		RAB4C222J
R3519,R3520		RAB4C472J
Other Resistors		RS1/16S###J
OTHERS		
CN3501-CN3504	40P CONNECTOR	AKM1217
CN3506	40P CONNECTOR	AKM1217
CN3505		VKN1310
[DIGITAL DD CON BLOCK]		
CAPACITORS		
C3609		CKSSYF104Z16
RESISTORS		
R3611		RAB4C101J
Other Resistors		RS1/16S###J

HD LED ASSY

SEMICONDUCTORS		
D1671		SML-311UT
D1672		SML512BC4T
COILS AND FILTERS		
⚠F1671-F1673	CHIP SOLID INDUCTOR	QTL1011

HD IR ASSY

SEMICONDUCTORS		
Q1681		2SC4116
D1681		DA204U
CAPACITORS		
C1681		CEVW470M6R3
C1682		CKSRYB103K50
C1683		CKSSYB102K50
C1684		CKSSYF104Z16
RESISTORS		
All Resistors		RS1/16S###J
OTHERS		
CN1681	3P L TYPE PLUG	KM200NA3L
V1681	REMOTE RECEIVER UNIT	RPM7240-H4

HD AUDIO ASSY

OTHERS		
J3901	1P BOARD IN WIRE	ADX3123
[AUDIO AMP BLOCK]		
SEMICONDUCTORS		
IC3754		BR24L02FJ-W
IC3751		LA4625
IC3752		NJM7809FA
IC3753		NJW1183L
Q3751,Q3754,Q3755,Q3757		2SA1576A
Q3756,Q3759		2SC4081
Q3758,Q3760		DTC124EUA
CAPACITORS		
C3797,C3808,C3812,C3814		CEAT1R0M50
C3775,C3777,C3788,C3790,C3791		CEHAT100M50
C3799		CEHAT100M50
C3761,C3764,C3786,C3798		CEHAT101M16
C3766,C3780,C3783-C3785		CEHAT1R0M50
C3762		CEHAT220M50
C3752,C3753,C3819,C3820		CEHAT2R2M50
C3759		CEHAT331M16
C3757		CEHAT471M25
C3755		CEHAT472M25
C3763		CEHATR47M50
C3754,C3805		CFTLA103J50
C3767,C3770,C3772-C3774		CFTLA104J50
C3781,C3782,C3789,C3792-C3795		CFTLA104J50
C3806,C3807,C3813		CFTLA104J50
C3810		CFTLA223J50
C3778		CFTLA334J50
C3758,C3760,C3796		CKSRYB103K50
C3769,C3815		CKSRYB222K50
C3779		CKSRYB822K50
C3816		CKSRYF104Z16
RESISTORS		
R3768-R3770,R3782		RD1/2MMF2R2J
R3752		RD1/2MMF4R7J
Other Resistors		RS1/16S###J

Mark	No.	Description	Part No.
		OTHERS	
	CN3752	12P PH CONNECTOR	AKM1335
	3771	AUDIO HEATSINK	ANH1636
A	CN3751	3P TOP POST (VH)	B3P-VH
	3772-3775	SCREW	VBB30P100FNI
	KN3751	WRAPPING TERMINAL	VNF1084
	KN3752	WRAPPING TERMINAL	VNF1084
		[ST TERMINAL BLOCK]	
		COILS AND FILTERS	
	⚠L3901,L3902	LINE FILTER	ATF1206
		CAPACITORS	
B	⚠C3906,C3908,C3914,C3916		CCSRCH101J50
	C3903,C3911		CKSRYB332K50
	C3904,C3912		CKSRYF473Z50
		RESISTORS	
	R3901-R3904		RD1/2MMF100J
		OTHERS	
	JA3901	SPEAKER TERMINAL	AKE1061

C

POWER SUPPLY UNIT

POWER SUPPLY Unit has no service part.

D

E

F

6. ADJUSTMENT

1. At shipment, the unit is adjusted to its best conditions. Normally, it is not necessary to readjust even if an assembly is replaced. If the adjustment is shifted or if it becomes necessary to readjust because of part replacement, etc., perform the adjustment as described below.
2. Any value changed in Service/Factory mode will be stored in memory as soon as it is changed. Before readjustment, take note of the original values for reference in case you need to restore the original settings.
3. Use a stable AC power supply.

6.1 ADJUSTMENT REQUIRED WHEN THE SET IS REPAIRED OR REPLACED

■ When any of the following assemblies is replaced

POWER SUPPLY Unit	(Clear the history data on the number of power-ons.) Refer to "7.1.7 HOW TO CLEAR HISTORY DATA."
HD DIGITAL Assy	Writing of backup data is required. Refer to the "7.1.6 BACKUP WHEN THE MAIN UNIT IS ADJUSTED. "
50 X DRIVE Assy	No adjustment required
50 Y DRIVE Assy	No adjustment required
Service Panel	Refer to the "6.3 METHOD FOR REPLACING THE SERVICE PANEL ASSY."
Other assemblies	No adjustment required

■ When any part in the following assemblies is replaced

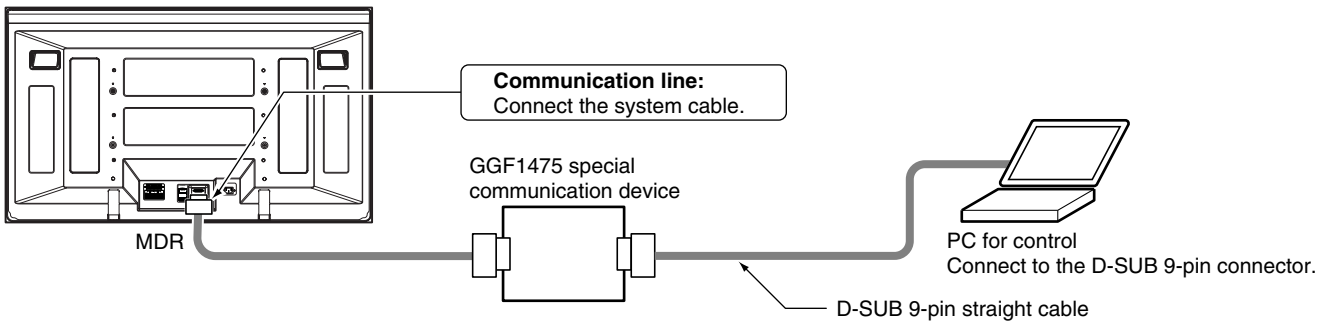
POWER SUPPLY Unit	The assembly must be replaced as a unit, and no part replacement is allowed.
HD DIGITAL Assy	No adjustment required
50 X DRIVE Assy	No adjustment required
50 Y DRIVE Assy	No adjustment required
Other assemblies	No adjustment required

6.2 RS-232C COMMAND

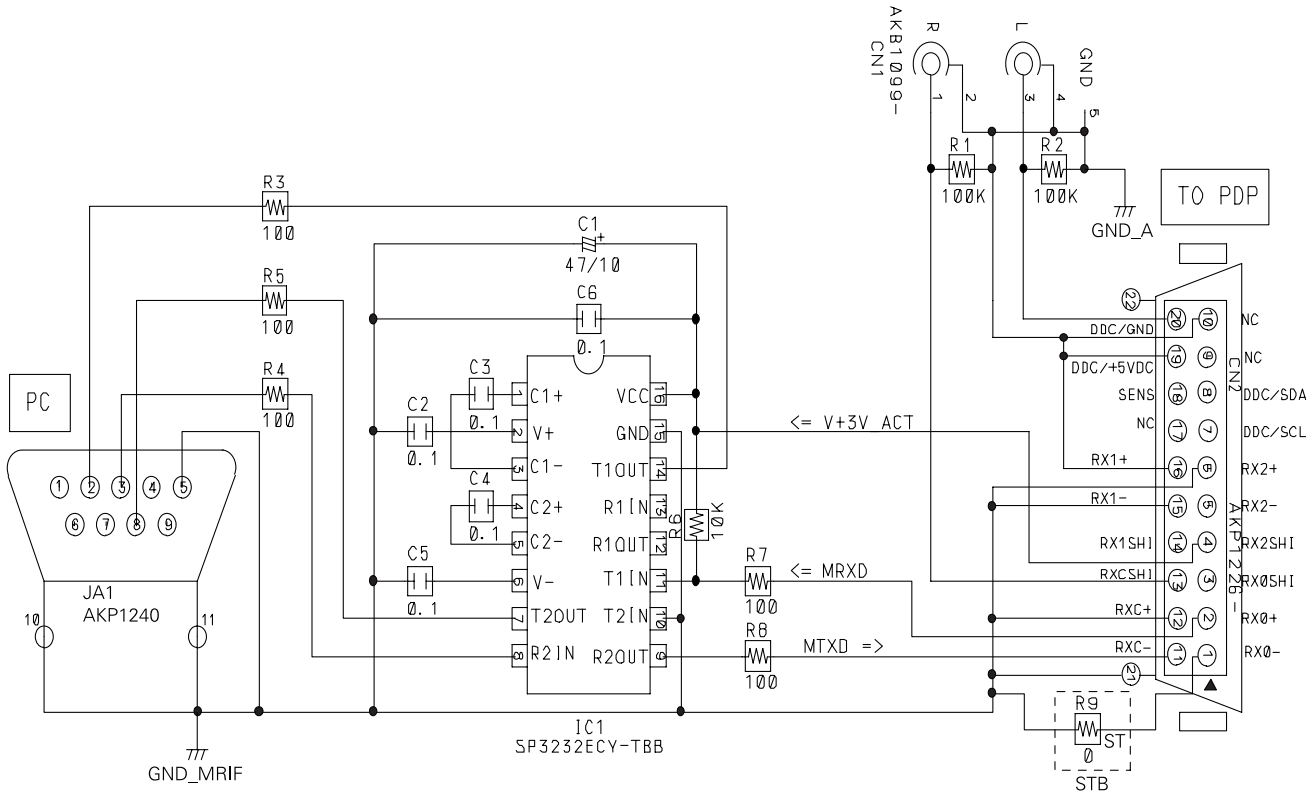
- The panel control items for the PDP-506PE, PU / PDP-436PE, PU systems can be controlled with the RS-232C commands by connecting a PC through the GGF1475 special communication device when the Media Receiver is not connected with the PDP.

Note: The special communication device for the PDP-503P cannot be used with this unit, because the control lines within the MDR cable are different.

1. Connection



• Schematic diagram of the special communication device



2. Command format

■ Communication protocol

Start bit : 1bit
Data : 8bit
Parity : 0 (none)
Stop bit : 1bit
Baud rate : 38400bps

■ Start and stop conditions

STX (start condition): 0x02
ETX (stop condition): 0x03

■ ID setting

No ID setting (corresponding to all ASCII codes)

■ Acknowledgement (ACK)

- Acknowledgement (ACK) will be sent back when the unit returns to Standby mode for the next command after the process of the received command is finished.
- The return data will be a received command in capital letters, but without an ID.

Example of communication: For a command listed on the command list

MR / External PC

STX	ID	Command	ETX
0x02	**	CBU	0x03

Returns from the PDP

STX	Command	ETX
0x02	CBU	0x03

- If a received command is not one listed on the command list, "ERR" (3 characters) will be sent back.

Example of communication: For a command that is not listed on the command list

MR / External PC

STX	ID	Command	ETX
0x02	**	AAA	0x03

Returns from the PDP

STX	Command	ETX
0x02	ERR	0x03

- If the operation of a received command is not possible in a certain status, "XXX" (3 characters) will be sent back.

Example of communication: If an adjustment command that gives an adjustment value out of the adjustable range is sent

MR / External PC

STX	ID	Adjustment Command	Adjustment Value	ETX
0x02	**	VOL	128	0x03

Returns from the PDP

STX	Command	ETX
0x02	XXX	0x03

■ Error process

If an error is generated between STX and ETX, a return signal will not be issued.

3. Definition of various commands

■ Simple-function command

A simple-function command orders an operation that will conclude by itself, and it consists of 3 characters.

Example of communication:

MR / External PC

STX	ID	Command	ETX
0x02	**	CPD	0x03

Returns from the PDP

STX	Command	ETX
0x02	CPD	0x03

■ Adjustment command and adjustment value

An adjustment command is accompanied by an adjustment value and orders a change in the adjustment value, such as for the contrast adjustment.

- Adjustment command + adjustment value => The attached parameter will be the adjustment value.
- The adjustment value to be attached to an adjustment command consists of 3 characters in decimal, in the range of 000 to 999.

Example of communication:

MR / External PC

STX	ID	Adjustment Command	Adjustment Value	ETX
0x02	**	CNT	128	0x03

Returns from the PDP

STX	Adjustment Command	Adjustment Value	ETX
0x02	CNT	128	0x03

- If the adjustment value of the received command is out of the adjustable range, "XXX" will be sent back, and the adjustment value will not be changed.
- If the adjustment value of the received command is the same as the current adjustment value, the adjustment value will be overwritten, and "XXX" will not be sent back.

■ Setup command and setup value

A setup command is accompanied by a setup value and orders a change in the setup value, such as for the mask setup.

- Setup command + setup value => The attached parameter will be the setup value.
- The setup value to be attached to a setup command consists of 3 characters in decimal, in the range of S00 to S99.

Example of communication:

MR / External PC

STX	ID	Adjustment Command	Adjustment Value	ETX
0x02	**	MKS	S02	0x03

Returns from the PDP

STX	Adjustment Command	Adjustment Value	ETX
0x02	MKS	S02	0x03

- If the setup value of the received command is out of the range, "XXX" will be sent back, and the setup value will not be changed.
- If the setup value of the received command is the same as the current setup value, the setup value will be overwritten, and "XXX" will not be sent back.

■ QUEST (acquiring status) command

If a QUEST command is received from the main unit's microcomputer, data for various adjustment values will be read from memory and sent back. The return data consist of the received command as an echo back, return data, and a checksum.

- Return data: A string of characters defined for each QUEST command is converted into ASCII codes and transmitted.
- The configuration and the data length of return data are defined for individual QUEST commands.

Example of communication:

MR / External PC

STX	ID	QST Command	ETX
0x02	**	QS1	0x03

Returns from the PDP

STX	QST Command	Return Data	Checksum	ETX
0x02	QS1	54AHM2**	7B	0x03

- Checksum (CS): A checksum is used for judging if any error exists in the data sent back from the panel. If an error is detected, it is possible to resend the QUEST command from the MR / External PC to try to acquire data again.

4. RS-232C command for module microcomputer

Command Name		Function		Effective only in Factory mode	Remarks
A					
ABL	***	ABL ADJUSTMENT	Adjusting the upper limit of the power	○	
AMT	S00	AUDIO MUTE OFF	Turning off the audio muting		
	S01	AUDIO MUTE ON	Turning on the audio muting		
APW	S00	APL WB FUNCTION:OFF	WB correction interlocked with APL: OFF	○	
	S01	APL WB FUNCTION:ON	WB correction interlocked with APL: ON	○	
B					
BAL	***	BALANCE ADJUSTMENT	Audio balance adjustment		
BAS	***	BASS ADJUSTMENT	Audio bass adjustment		
BCP		BACKUP COPY	Copying the backup data in the EEPROM	○	
C					
CBU		CLEAR BACKUP	Clearing backup data	○	
CHM		CLEAR HOUR METER	Clearing data of the hour meter	○	Used only when the panel is replaced
CPC		CLEAR POWER ON COUNT	Clearing power-on count data	○	Used only when the power unit is replaced
CPD		CLEAR POWER DOWN	Clearing power-down information	○	Used only when the panel is replaced
CPM		CLEAR PLUSE METER	Clearing data of the pulse meter	○	Used only when the panel is replaced
CSD		CLEAR SHUT DOWN	Clearing shutdown information	○	Used only when the panel is replaced
D					
DRV	S00	DRIVE OFF	Main power off		
	S01	DRIVE ON	Main power on		
E					
ESV	S00	POWER CONTROL NORMAL	Setting Power Consumption mode to 4-split normal curve		
	S01	POWER CONTROL MODE1	Setting Power Consumption mode to 2-split normal curve		
	S02	POWER CONTROL MODE2	Setting Power Consumption mode to 2-split power-saving curve		
	S10	POWER CONTROL NORMAL	Setting Power Consumption mode to 4-split normal curve (domestic)		
	S11	POWER CONTROL MODE1	Setting Power Consumption mode to 2-split normal curve (domestic)		
	S12	POWER CONTROL MODE2	Setting Power Consumption mode to 2-split power-saving curve (domestic)		
F					
FAJ		FINISH ADJUSTMENT	Determining the flag of the HD DIGITAL Assy adjustment in "adjustment is completed"	○	
FAN		FACTRY NO		○	
FAY		FACTRY YES	Entering Factory mode		Turning the mask setting off
FCS	S00	FOCUS OFF	Turning the FOCUS function off		
	S01	FOCUS ON	Turning the FOCUS function on		
M					
MKC	S00	MASK COMBINATION OFF	MASK off		
	S01	MASK COMBINATION 01	H ramp (slant 1) M	○	
	S02	MASK COMBINATION 02	H ramp (slant 4) M	○	
	S03	MASK COMBINATION 03	Slanting ramp M	○	
	S04	MASK COMBINATION 04	30 for aging	○	
	S05	MASK COMBINATION 05	05 for aging	○	
	S06	MASK COMBINATION 06	Erasing afterimage 1	○	
	S07	MASK COMBINATION 07	Erasing afterimage 2 (RGB: zigzag, V: reverse)	○	
	S08	MASK COMBINATION 08	White (change in luminance level)	○	
	S09	MASK COMBINATION 09	PEAK SEEK RASTER	○	
MKS	S00	MASK SINGLE OFF	MASK OFF		
	S01	MASK SINGLE 1	H ramp (slant 1)	○	
	S02	MASK SINGLE 2	H ramp (slant 4)	○	
	S03	MASK SINGLE 3	V ramp (slant 1)	○	
	S04	MASK SINGLE 4	Slanting ramp	○	

Command Name		Function		Effective only in Factory mode	Remarks
MKS	S05	MASK SINGLE 5	Window(Hi=870Lo=102)	O	
	S06	MASK SINGLE 6	Window(Hi=1023Lo=102)	O	
	S07	MASK SINGLE 7	Window(Hi=1023)	O	
	S08	MASK SINGLE 8	Window(Hi=1023)4%	O	
	S09	MASK SINGLE 9	Window(Hi=1023)1.25%	O	
	S10	MASK SINGLE 10	Window(1/7LINE)	O	
	S11	MASK SINGLE 11	STRIPE(MGT/GRN)	O	
	S12	MASK SINGLE 12	STRIPE(GRN/MGT)	O	
	S13	MASK SINGLE 13	B & W, checker (1 line)	O	
	S14	MASK SINGLE 14	B & W, checker (2 lines)	O	
	S15	MASK SINGLE 15	B & W, checker (4 lines)	O	
	S16	MASK SINGLE 16	B & W, checker (8 lines)	O	
	S17	MASK SINGLE 17	COLOR BAR	O	
	S18	MASK SINGLE 18	Slanting lines	O	
	S19	MASK SINGLE 19	Red & black, checker (1 line)	O	
	S20	MASK SINGLE 20	Red & black, checker (2 lines)	O	
	S21	MASK SINGLE 21	Red & black, checker (4 ines)	O	
	S22	MASK SINGLE 22	Red & black, checker (8 lines)	O	
	S23	MASK SINGLE 23	RGB zigzag, V reverse	O	
	S24	MASK SINGLE 24	SUS 2000 pulses (black raster)	O	
	S25	MASK SINGLE 25	Window(Hi=870Lo=102) PATTAN3	O	
	S26	MASK SINGLE 26	Window(Hi=1023Lo=102) PATTAN3	O	
	S27	MASK SINGLE 27	Window(Hi=1023) Pattern 3	O	
	S28	MASK SINGLE 28	Window(Hi=1023)4% Pattern 3	O	
	S29	MASK SINGLE 29	Window(Hi=1023)1.25% Pattern 3	O	
	S30	MASK SINGLE 30	Window(1/7LINE) Pattern 3	O	
	S51	MASK SINGLE 51	Raster - White	O	
	S52	MASK SINGLE 52	Raster - Red	O	
	S53	MASK SINGLE 53	Raster - Green	O	
	S54	MASK SINGLE 54	Raster - Blue	O	
	S55	MASK SINGLE 55	Raster - Black	O	
	S56	MASK SINGLE 56	Raster - Cyan	O	
	S57	MASK SINGLE 57	Raster - Magenta	O	
	S58	MASK SINGLE 58	Raster - Yellow	O	
	S59	MASK SINGLE 59	Raster - Cyan 460 :W	O	
	S60	MASK SINGLE 60	Raster - Green 774 :W	O	
	S61	MASK SINGLE 61	Raster - Gray 912 :W	O	
	S62	MASK SINGLE 62	Raster - Yellow egg color: W	O	
	S63	MASK SINGLE 63	Raster - Beige: W	O	
	S64	MASK SINGLE 64	Raster - Sky color: W	O	
	S65	MASK SINGLE 65	Raster - Pale purple: W	O	
	S66	MASK SINGLE 66	Raster - Magenta 54 :W	O	
	S67	MASK SINGLE 67	Raster - Red 588	O	
	S68	MASK SINGLE 68	Red 1023 + α	O	
	S69	MASK SINGLE 69	Green 1023 + α	O	
	S70	MASK SINGLE 70	Blue 1023 + α	O	
	S71	MASK SINGLE 71	Red 588 + α	O	
	S72	MASK SINGLE 72	Green 588 + α	O	
	S73	MASK SINGLE 73	Blue 588 + α	O	

Command Name		Function		Effective only in Factory mode	Remarks
MKS	S74	MASK SINGLE 74	Raster -Gray 512 (reservation)	○	
P					
PAV	S**	PANEL AV MODE	Switching panel functions interlocked with the AV selection		
PBH	***	PANEL BLUE HIGH	Panel white balance adjustment - Blue highlight	○	
PBL	***	PANEL BLUE LOW	Panel white balance adjustment - Blue low light	○	
PDM	S00	PD MUTE OFF	Passing PD signals to the Power SUPPLY Unit => Power-down		
	S01	PD MUTE ON	Not passing PD signals to the Power SUPPLY Unit => No power-down		
PFN		FACTORY NO	Factory mode: off	○	
PFS		PANEL FINAL SETUP	Setup at shipment	○	
PFY		FACTORY YES	Factory mode: on		
PGH	***	PANEL GREEN HIGH	Panel white balance adjustment - Green highlight	○	
PGL	***	PANEL GREEN LOW	Panel white balance adjustment - Green low light	○	
PGM	S**	PANEL GAMMA	Setting of the gamma table		
PMT	S00	MUTE OFF	Canceling panel muting		
	S01	MUTE ON	Panel muting		
POF		POWER OFF	Power off		
PON		POWER ON	Power on		
PPT	S00	PANEL PROTECT OFF	Panel protection: off	○	
	S01	PANEL PROTECT ON	Panel protection: on	○	
PUC	S00	PUER CINEMA:OFF	Pure cinema: off		
	S01	PUER CINEMA:STD	Pure cinema: standard		
	S02	PUER CINEMA:ADV	Pure cinema: advanced		
Q					
QAJ		QUEST ADJUSTMENT	Acquiring various adjustment values		
QIP		QUEST PANEL INFORMATION	Acquiring various input signal data		
QPD		QUEST POWER-DOWN	Acquiring logs of power-down points		
QPM		QUEST PULSE METER	Acquiring data of the pulse meter		
QPW		QUEST PANEL WHITE BALANCE	Acquiring panel white balance adjustment values		
QS1		QUEST STATUS 1	Acquiring data on the unit, such as the version of the program		
QS2		QUEST STATUS 2	Acquiring data on the status of the unit, such as temperature		
QSD		QUEST SHUT DOWN	Acquiring data on shutdown		
QSI		QUEST SIGNAL INFORMATION	Acquiring data related with signals		
R					
RBL	S**	PANEL REVISE BLUE LEVEL	Setting of blue level for panel degradation correction	○	
RGL	S**	PANEL REVISE GREEN LEVEL	Setting of green level for panel degradation correction	○	
RHI	***	RED HIGH	User white balance - Red highlight		
RLW	***	RED LOW	User white balance - Red low light		
RRL	S**	PANEL REVISE RED LEVEL	Setting of red level for panel degradation correction	○	
RSW	***	XY-RST-W ADJ	Adjustment of the width of XY reset pulse	○	
S					
SDM	S00	SD MUTE OFF	Shutdown enabled		
	S01	SD MUTE ON	Shutdown prohibited		
SFR	S01	SUS FREQUENCY MODE1	Measures against AM radio noise - Pattern 1	○	
	S02	SUS FREQUENCY MODE2	Measures against AM radio noise - Pattern 2	○	
	S03	SUS FREQUENCY MODE3	Measures against AM radio noise - Pattern 3	○	
	S04	SUS FREQUENCY MODE4	Measures against AM radio noise - Pattern 4	○	
	S05	SUS FREQUENCY MODE5	Measures against AM radio noise - Pattern 5	○	
	S06	SUS FREQUENCY MODE6	Measures against AM radio noise - Pattern 6	○	
	S07	SUS FREQUENCY MODE7	Measures against AM radio noise - Pattern 7	○	

Command Name		Function		Effective only in Factory mode	Remarks
SFR	S08	SUS FREQUENCY MODE8	Measures against AM radio noise - Pattern 8	○	
SMM	S**	SIDE MASK MODE	Setting of the effective area during streaking correction	○	
SN0	***	SERIAL NO 0	Setting of the serial No. 0 (panel)	○	
SN1	***	SERIAL NO 1	Setting of the serial No. 1 (panel)	○	
SN2	***	SERIAL NO 2	Setting of the serial No. 2 (panel)	○	
SN3	***	SERIAL NO 3	Setting of the serial No. 3 (panel)	○	
SN4	***	SERIAL NO 4	Setting of the serial No. 4 (panel)	○	
SRS	S00	SRS OFF	SRS function: off		
	S01	SRS ON	SRS function: on		
SYS	S00	SYSTEM CABLE NO	Prohibiting monitoring of cable disconnection detection		
	S01	SYSTEM CABLE YES	Permitting monitoring of cable disconnection detection		
T					
TBS	S00	TRUBASS OFF	TruBass function: off		
	S01	TRUBASS ON	TruBass function: on		
TRE	***	TREBLE ADJUSTMENT	Audio treble adjustment		
U					
UAJ		UN-ADJUSTMENT	Determining the flag for the HD DIGITAL Assy adjustment in "not adjusted"	○	
V					
VFQ	S01	FREQENCY VIDEO 48Hz	Setting the frequency in Mask mode to VD-48 Hz	○	
	S02	FREQENCY VIDEO 50Hz	Setting the frequency in Mask mode to VD-50 Hz	○	
	S03	FREQENCY VIDEO 60Hz	Setting the frequency in Mask mode to VD-60 Hz	○	
	S05	FREQENCY THEATER 72Hz	Setting the frequency in Mask mode to VD-72 Hz	○	
	S06	FREQENCY 75Hz	Setting the frequency in Mask mode to VD-75 Hz	○	
	S13	FREQENCY PC 60Hz	Setting the frequency in Mask mode to PC-60 Hz	○	
	S14	FREQENCY PC 70Hz	Setting the frequency in Mask mode to PC-70 Hz	○	
	S22	FREQENCY VIDEO 50Hz NONSTD	Setting the frequency in Mask mode to VD-50 Hz (nonstandard)	○	
	S23	FREQENCY VIDEO 60Hz NONSTD	Setting the frequency in Mask mode to VD-60 Hz (nonstandard)	○	
	S25	FREQENCY VIDEO 72Hz NONSTD	Setting the frequency in Mask mode to VD-72 Hz (nonstandard)	○	
	S26	FREQENCY VIDEO 75Hz NONSTD	Setting the frequency in Mask mode to VD-75 Hz (nonstandard)	○	
VOF	***	Vofs ADJUSTMENT	Adjustment of the reference value of Vofs voltage	○	
VOL	***	VOLUME	Audio volume adjustment		
VRP	***	Vrp ADJUSTMENT	Adjustment of the reference value of Vrst-p voltage	○	
VSU	***	Vsus ADJUSTMENT	Adjustment of the reference value of Vsus voltage	○	
W					
WBI	S00	WB INITIALIZE NO	Panel WB standard output mode: off	○	
WBI	S01	WB INITIALIZE YES	Panel WB standard output mode: on	○	
X					
XSB	***	X-SUS-B ADJ	X-SUS-B ADJ	○	
Y					
YSB	***	Y-SUS-B ADJ	Y-SUS-B ADJ	○	
YTG	***	Y-SUSTAIL ADJ	Y-SUSTAIL ADJ	○	
YTW	***	Y-SUSTAIL W AJD	Y-SUSTAIL W AJD	○	

5. QUEST commands (for acquiring status)

With a QUEST command, data on STBY/ON, PD, and SD can be obtained while the unit is on.

■ Acquisition of panel statuses • • • [QS1]

The command QS1 is for acquiring data necessary for authentication of both the main unit's microcomputer and the module's microcomputer.

Command Format	Effective Operation Modes	Function	Remarks
[QS1]	All operations	To acquire data on product status	Return data: 3 (ECO)+43(DATA)+2(CS)=48Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QS1
1	Resolution/size	1Byte	5
2	Generation	1Byte	6
3	Destination	1Byte	*
4	Grade	1Byte	*
5	Product type	1Byte	S
6	MDUcom-Boot	3Byte	01A
7	MDUcom-PRG	8Byte	001SM "space × 3"
8	SEQUENCE PROCESSOR-Boot	3Byte	01A
9	SEQUENCE PROCESSOR-Boot	8Byte	001AM "space × 3"
10	SQ-VIDEO(43/42)	4Byte	001X
11	SQ-PC(43/42)	4Byte	001X
12	SQ-VIDEO(50/61)	4Byte	001W
13	SQ-PC(50/61)	4Byte	001W
CS		2Byte	7B

● Resolution/size	
4	1024*768-43
5	1280*768-50

● Generation	
6	G6

● Destination	
*	Common

● Grade	
*	Common

● MDUcom/SEQUENCE PROCESSOR-Boot • • • 3Byte		
1st character		Representing the boot version in 2-digit decimal
2nd character		
3rd character	A	When the boot version is common to 43/50
	X	When the boot version is only for 43
	W	When the boot version is only for 50

● Product type	
S	System model

● MDUcom/SEQUENCE PROCESSOR-PRG • • • 8Byte		
1st character	–	For a mass-production product
2nd character		For representing the version in 2-digit decimal
3rd character		
4th character	A	When the program is common to 43/50 (for SEQUENCE PROCESSOR)
	S	When the program is only for another unit (for MDUcom)
5th character	M	Fixed
6th character		Reservation
7th character		Reservation
8th character		Reservation

● SEQUENCE-Data • • • 8Byte		
1st - 3rd characters	Num	For representing the version in 3-digit decimal
4th character	W	When the sequence data are only for 50
	X	When the sequence data are only for 43

• For the version indication, the bytes reserved for special use must be replaced with spaces if they are not used.

■ Acquisition of panel operation data • • • [QS2]

The command QS2 is for acquiring data on the panel's operations. Basically, this command is used for the module's microcomputer to inform the main unit's microcomputer of changes in panel operation.

Command Format	Effective Operation Modes	Function	Remarks
[QS2]	All operations	To acquire data on operations of the panel	Return data: 3 (ECO)+23(DATA)+2(CS)=28Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QS2
1	Notification of mode shifting to STB	1Byte	1
2	Flag for adjustment of the main unit	1Byte	0
3	Flag for adjustment-data backup	1Byte	0
4	"1st PD" data	1Byte	0
5	"2nd PD" data	1Byte	0
6	Reservation	3Byte	***
7	Temperature data (TEMP 1)	3Byte	128
8	SD main data	1Byte	0
9	SD subdata	1Byte	0
10	Operation status induced by SD	1Byte	0
11	Data from the hour meter	8Byte	00000259
12	MASK indication	1Byte	0
CS		2Byte	4A

Note : "00000259" of "Data from the hour meter" means 2 hours 59 minuts.

● Notification of mode shifting to Standby	
0	Entering Standby mode failed
1	Entering Standby mode succeeded

● Adjustment of the main unit	
0	Adjustment completed
1	Adjustment not completed

● Adjustment-data backup	
0	With backup data
1	No data

● PD data	
0	No PD data
1	Not used
2	POWER
3	SCAN
4	SCN-5V
5	Not used
6	Y-DCDC
7	Y-SUS
8	ADRS
9	X-DRV
A	X-DCDC
B	X-SUS
C	Not used
D	SQ-IC
E	Not used
F	Specification inability

● SD main data	
0	No SD
1	SQ-IC
2	MDU-IIC
3	RST2
4	Panel having high temperature
5	Short-circuited speaker

● SD subdata (IIC)	
0	No SD subdata
1	EEPROM
2	BACKUP
3	DAC
4	VOL IC
5	DVI

● Operation status induced by SD	
0	Normal
1	Relay-off completed
2	During warning indication

● MASK indication	
0	MASK-OFF
1	MASK-ON

■ Acquisition of other data on the panel • • • [QIP]

The command QIP is for acquiring data other than those available with QS1 (data necessary before turning the power on) and QS2 (data to inform of operational status change).

Command Format	Effective Operation Modes	Function	Remarks
[QIP]	All operations	To acquire data on operations of the panel	Return data: 3 (ECO)+39(DATA)+2(CS)=44Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QIP
1	SERIAL	15Byte	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _
2	HOUR METER	8Byte	00000000
3	BACKUP HR MTR	8Byte	00000000
4	PON COUNTER	8Byte	00000000
CS		2Byte	94

Note : The real product serial number is displayed in "SERIAL".

■ Acquisition of panel adjustment data (common data) • • • [QAJ]

The command QAJ is for acquiring data on the panel's factory-preset items that are common to the main unit and that share the same memory.

Command Format	Effective Operation Modes	Function	Remarks
[QAJ]	All operations	To acquire data on operations of the panel	Return data: 3 (ECO)+27(DATA)+2(CS)=32Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QAJ
1	V-SUS adjustment value	3Byte	128
2	V-OFT adjustment value	3Byte	128
3	V-RST-P adjustment value	3Byte	128
4	XSB adjustment value	3Byte	128
5	YSB adjustment value	3Byte	128
6	YTG adjustment value	3Byte	128
7	YTW adjustment value	3Byte	128
8	RSW adjustment value	3Byte	128
9	R-RIVISE setting value	1Byte	0
10	G-RIVISE setting value	1Byte	0
11	B-RIVISE setting value	1Byte	0
CS		2Byte	B7

■ Acquisition of ABL/WB adjustment data • • • [QPW]

The command QPW is for acquiring data on the panel's factory-preset items whose memory tables are changed in sequence.

Command Format	Effective Operation Modes	Function	Remarks
[QPW]	All operations	To acquire data on operations of the panel	Return data: 3 (ECO)+35(DATA)+2(CS)=40Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QPW
1	Drive sequence	3Byte	60V
2	Standard/nonstandard	1Byte	S
3	Type of ABL/WB tables	2Byte	T2
4	ABL adjustment value	3Byte	128
5	R-HIGH adjustment value	3Byte	256
6	G-HIGH adjustment value	3Byte	256
7	B-HIGH adjustment value	3Byte	256
8	R-LOW adjustment value	3Byte	512
9	G-LOW adjustment value	3Byte	512
10	B-LOW adjustment value	3Byte	512
11	Gamma setting	1Byte	A
12	Streaking correction	1Byte	1
13	Peripheral luminance correction	1Byte	0
14	Reservation	1Byte	*
15	WB interlocked with APL	1Byte	0
16	Transition of protective operations	1Byte	0
17	Reservation	2Byte	**
CS		2Byte	37

● Drive sequence

48V	Video48 Hz
50V	Video50 Hz
60V	Video60 Hz
72V	Video72 Hz
75V	Video75 Hz
60P	PC60Hz
70P	PC70Hz

● Standard/ nonstandard

S	Standard
N	Nonstandard

● Gamma setting

n	0 to F

● Setting for Items 12 and 15

0	OFF
1	ON

● Peripheral luminance correction

0	OFF
2	ON (interlocked with APL)

● Transition of brightness by protective operations

0	Upper limit state for brightness
1	Brightness being reduced
2	Lower limit state for brightness
3	Brightness being increased

● Type of ABL/WB tables

Tn	n: 1 to 4

■ Acquisition of parameters • • • [QPM]

The command QPM is for acquiring the accumulated number of pulses for each of 5 blocks from the EEPROM.

Command Format	Effective Operation Modes	Function	Remarks
[QPM]	All operations	To acquire data on operations of the panel	Return data: 3 (ECO)+40(DATA)+2(CS)=45Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QPM
1	Pulse meter B 1	8Byte	00000000
2	Pulse meter B 2	8Byte	00000000
3	Pulse meter B 3	8Byte	00000000
4	Pulse meter B 4	8Byte	00000000
5	Pulse meter B 5	8Byte	00000000
CS		2Byte	E7

• The output data on the accumulated number of pulses for each block are calculated in the following way: the high-order 4 bytes of the accumulated number of pulses for each block are converted into a decimal number, and the high-order 8 digits are transmitted. The unit of each block is M_pulse (mega).

■ Acquisition of PD logs • • • [QPD]

The command QPD is for acquiring data from the 8 latest power-down (PD) logs.

Command Format	Effective Operation Modes	Function	Remarks
[QPD]	All operations	To acquire data on the power-down logs	Return data: 3 (ECO)+80(DATA)+2(CS)=85Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QPD
1	Latest "1st PD" data	1byte	A
2	Latest "2nd PD" data	1byte	2
3	Data from the hour meter for the latest PD	8byte	00010020
4	Second latest "1st PD" data	1byte	E
5	Second latest "2nd PD" data	1byte	9
6	Data from the hour meter for the second latest PD	8byte	00008523
7	Third latest "1st PD" data	1byte	4
8	Third latest "2nd PD" data	1byte	3
9	Data from the hour meter for the third latest PD	8byte	00004335
10	Fourth latest "1st PD" data	1byte	2
11	Fourth latest "2nd PD" data	1byte	0
12	Data from the hour meter for the fourth latest PD	8byte	00000945
13	Fifth latest "1st PD" data	1byte	4
14	Fifth latest "2nd PD" data	1byte	0
15	Data from the hour meter for the fifth latest PD	8byte	00000715
16	Sixth latest "1st PD" data	1byte	A
17	Sixth latest "2nd PD" data	1byte	2
18	Data from the hour meter for the sixth latest PD	8byte	00000552
19	Seventh latest "1st PD" data	1byte	A
20	Seventh latest "2nd PD" data	1byte	0
21	Data from the hour meter for the seventh latest PD	8byte	00000213
22	Eighth latest "1st PD" data	1byte	D
23	Eighth latest "2nd PD" data	1byte	0
24	Data from the hour meter for the eighth latest PD	8byte	000001A7
CS		2Byte	27

● PD data	
0	No PD
1	Not used
2	P-POWER
3	SCAN
4	SCN-5V
5	Not used
6	Y-DCDC
7	Y-SUS
8	Address
9	X-DRIVE
A	X-DCDC
B	X-SUS
C	DIG-DCDC
D	QS (driving stopped)
E	Not used
F	Specification inability

■ Acquisition of SD logs • • • [QSD]

The command QSD is for acquiring the data from the 8 latest shutdown (SD) logs.

Command Format	Effective Operation Modes	Function	Remarks
[QSD]	All operations	To acquire data on the shutdown logs	Return data: 3 (ECO)+80(DATA)+2(CS)=85Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QSD
1	Latest SD data	1byte	1
2	Latest SD subcategory data	1byte	0
3	Data from the hour meter for the latest SD	8byte	00752013
4	Second latest SD data	1byte	5
5	Second latest SD subcategory data	1byte	0
6	Data from the hour meter for the second latest SD	8byte	00495204
7	Third latest SD data	1byte	2
8	Third latest SD subcategory data	1byte	3
9	Data from the hour meter for the third latest SD	8byte	00100355
10	Fourth latest SD data	1byte	2
11	Fourth latest SD subcategory data	1byte	5
12	Data from the hour meter for the fourth latest SD	8byte	00075620
13	Fifth latest SD data	1byte	1
14	Fifth latest SD subcategory data	1byte	0
15	Data from the hour meter for the fifth latest SD	8byte	00000852
16	Sixth latest SD data	1byte	2
17	Sixth latest SD subcategory data	1byte	5
18	Data from the hour meter for the sixth latest SD	8byte	000000451
19	Seventh latest SD data	1byte	0
20	Seventh latest SD subcategory data	1byte	0
21	Data from the hour meter for the seventh latest SD	8byte	00000000
22	Eighth latest SD data	1byte	0
23	Eighth latest SD subcategory data	1byte	0
24	Data from the hour meter for the eighth latest SD	8byte	00000000
CS		2Byte	7D

● SD data	
0	No SD
1	SQ-IC
2	MDU-IIC
3	RST2
4	Panel having high temperature
5	Short-circuited speaker

● SD subcategory	
0	No SD subcategory
1	EEPROM
2	BACKUP
3	DAC
4	VOL-IC
5	DVI
6	Not used

■ Acquisition of input signal data • • • [QSI]

The command QSI is for acquiring all data on input video signals.

Command Format	Effective Operation Modes	Function	Remarks
[QSI]	All operations	To acquire all data on input video signals	Return data: 3 (ECO)+66(DATA)+2(CS)=71Byte

Data Arrangement		Data Length	Output Example
ECO		3Byte	QSI
1	Type of drive sequence	3byte	60V
2	Standard/nonstandard	1byte	S
3	Type of ABL/WB tables	2byte	T1
4	Total value of PCN	4byte	0256
5	Total value of PRH	4byte	0256
6	Total value of PGH	4byte	0256
7	Total value of PBH	4byte	0256
8	Total value of PBR	4byte	0512
9	Total value of PRL	4byte	0512
10	Total value of PGL	4byte	0512
11	Total value of PBL	4byte	0512
12	Reservation	2byte	**
13	Detection of existence of H	1byte	Y
14	Detection of V frequency	4byte	6002
15	Reservation	4byte	****
16	Obtained APL data	4byte	1023
17	Number of SUS pulses	4byte	0457
18	Result of detection of still picture	1byte	1
19	Result of detection of cracking in the panel	1byte	1
20	Result of detection for scanning protection	1byte	1
21	Result of detection for external protection	1byte	1
22	Transition of protection operation	1byte	0
23	Reservation	4byte	****
CS		2Byte	27

● Detection of existence of H	
N	No H
Y	H detected

● Transition of brightness by protection operation	
0	Upper limit state for brightness
1	Brightness being reduced
2	Lower limit state for brightness
3	Brightness being increased

- If data for an item cannot be obtained during Standby mode, the return data for that item will be "*."
- The types of data for Items 1-3 in the table (drive sequence, standard/nonstandard, and type of ABL/WB tables) are the same as with the command QPW.
- Each total value for Items 4-11 represents that of panel WB, user WB, and degradation correction, and the actual data being sent to the ASTRA are output.
- Detection of V frequency: The V signal input to the panel is measured in the range of 30.51 to 99.99 Hz. The measured value is multiplied by 100 and then output.
- Number of SUS pulses : The number is calculated from data from APL and the drive sequence. The output value must be between 0174 and 2752.
- APL value: The APL value for the input video signal (or mask indication) will be output in the range of 0000 to 1023.

■ Setting for Factory mode permission/prohibition • • • [FAY/FAN] [PFY/PFN]

The commands FAY/FAN and PFY/PFN are for prohibiting/permitting panel-adjustment commands during normal operation and are to be used to avoid accidental change of panel adjustment values.

Command Format	Operation		Remarks
	Effective Operation Modes	Control (by the microcomputer itself)	
[FAY]	Normal operation mode while the power is on	Adjustment mode: ON	Mask indications will be forcibly turned off.
[PFY]			With a PFY command, the mask does not change.
[FAN]	During FAY	Adjustment mode: OFF	
[PFN]			

• Commands that are effective during normal operation will also be effective during FAY (PFY) mode.

Note:

• The functions shown below will be forcibly switched when Mask ON/OFF is switched. (Even if the panel is off, changed settings will be retained.)
While the status of Mask ON or OFF is maintained, if settings for the individual functions shown in ① and ② are changed, those settings are retained (even if the drive frequency is changed).

① Functions related to picture quality

Function	Setting while Mask is ON	Setting while Mask is OFF	Remarks
Peripheral luminance correction	OFF	ON	
WB correction interlocked with APL	OFF	ON	
Streaking correction	OFF	ON	

② Functions related to panel protection

Function	Setting while Mask is ON	Setting while Mask is OFF	Remarks
Detection of still picture	OFF	ON	
Detection of cracking in the panel	OFF	ON	
Scanning protection	OFF	ON	

• Depending on the type of mask displayed, phosphor burn of the panel may occur. As the panel-protection function is forcibly turned off with this model, care must be taken when color-bar signals are to be displayed for an extended period.

■ Backup function for adjustment values for the main unit • • • [FAJ/UAJ/CBU/BCP]

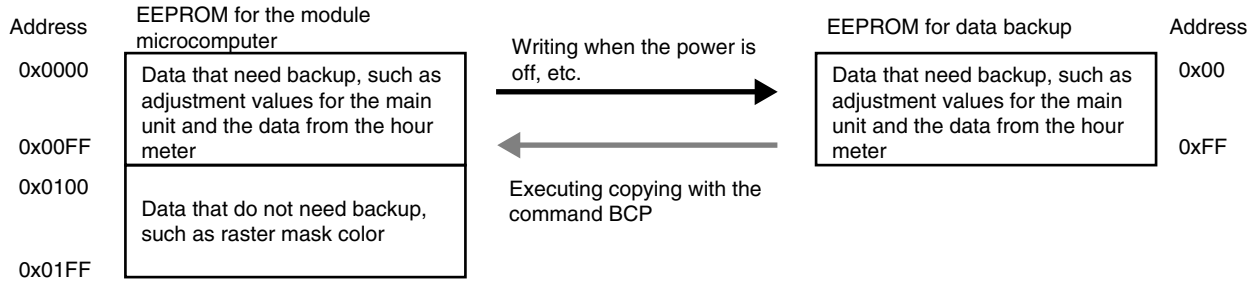
When the HD DIGITAL Assy is to be replaced, adjustment values can be copied from the backup EEPROM to the EEPROM of the Assy for service.

Command Format	Operation			Remarks
	Effective Operation Modes	Control (by the microcomputer itself)		
[FAJ]	During FAY	To make the flag setting that indicating that adjustment of the main unit has been completed	Writing 00 to the 4-kbyte ROM and copying to the 2-kbyte ROM	This takes at least 350 ms.
[UAJ]		To make the flag setting that indicating that adjustment of the main unit has not been completed	Writing F0 to the 4-kbyte ROM	
[CBU]		To make the flag setting that indicating that backup data have not been copied	Writing F0 to the 2-kbyte ROM	The backup ROM is initialized.
[BCP]		To make the flag setting that indicating that backup data have been copied	Copying backup data	

When the flag indicating that the line adjustments (SUS waveform, voltage margin, and panel WB) for the main unit have been completed is set to on, data stored from Addresses 0x0000 to 0X00FF in the digital EEPROM are copied to the same addresses of the backup EEPROM. Copying will be executed immediately before the relay of normal operation is off.

- When the command BCP is received while a warning indicating that backup copying has not been completed is displayed (conditions: main EEPROM = not adjusted, and backup EEPROM = adjusted), backed-up data will be copied to the main EEPROM, and various adjustment values related to Factory mode will be readjusted. Then LED warning indication will be shut off, and normal LED indication will be restored.

- If the backup EEPROM has not been adjusted when the command BCP is received (0x0063 is not written to all three addresses of the key data), copying of the backup data is not possible, and "XXX" is returned.



Note:
- When the command FAJ, UAJ, or CBU is executed, only high-order one-byte (0x00 or 0xF0) key data will be written to the EEPROM, and lower-order one-byte (0x63) data will not be changed.
- It takes at least 350 ms from reception of the command FAJ until an echo is sent back, because data are copied to the backup EEPROM.

■ Factory presetting • • • [PFS]

Command Format	Operation			Remarks
	Effective Operation Modes	Control (by the microcomputer itself)		
[PFS]	During FAY	Initialized to factory-preset values		

- When this command is executed, the values not stored in the EEPROM are initialized, mask indication is set to OFF, control of the power for line aging is set to OFF, and detection of the system cable is set to ON.

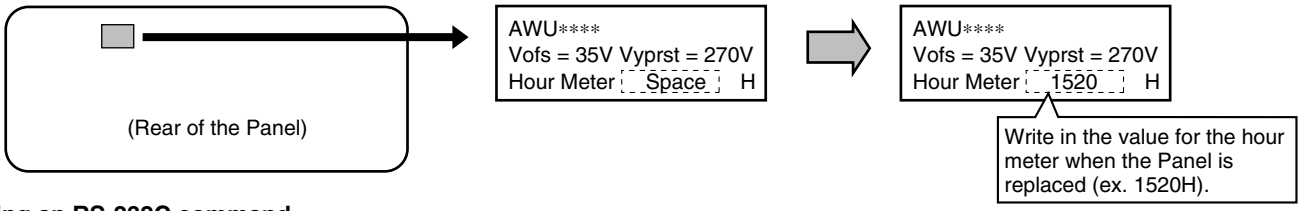
6.3 METHOD FOR REPLACING THE SERVICE PANEL ASSY

When the Panel Assy is replaced with one for service, the following adjustments are required:

■ Adjustments of Vofs voltage and Vyprst voltage

Enter the reference adjustment values for the Vofs voltage and Vyprst voltage that are written on the label attached to the panel for service.

Note: Enter the values, using an RS-232C command or the Factory Menu.



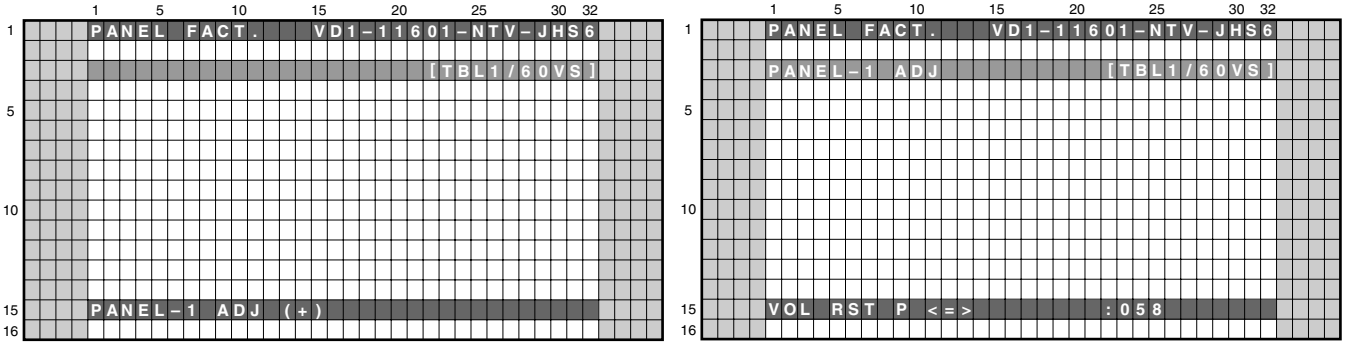
Using an RS-232C command

Enter a "PFY" command with Factory mode ON.

Convert the adjustment voltage values written on the label attached at the rear of the Panel to an input command, referring to the conversion chart. (See the next page.)

- Reference adjustment of the Vofs voltage: Ex. "Vofs = 35" → (Check the conversion chart.) Enter "VOF112."
- Reference adjustment of the Vyprst voltage: Ex. 50-inch "Vyprst = 270 V" → (Check the conversion chart.) Enter "VRP055." (Note that the conversion charts for 50-inch and 43-inch Panels are different.)

Using the Factory Menu



Select the main item "PANEL FACT." by pressing the MUTE key then enter Panel Factory mode by pressing the SET key.
Using the ▲/▼ keys, select "PANEL-1 ADJ" then press the SET key to enter the next lower nested layer.
Select "VOL-OFFSET" or "VOL RST P" then enter a command value converted from the voltage value, using the ◄/► keys.

■ Clearing data on various histories of the Panel, such as those on the hour meter

- It is necessary to clear the data on the hour meter, etc. to match them to the actual driving hours of the Panel.
- It is also necessary to clear the data on SD and PD, because the accumulated power-on time when a shutdown or power-down occurred is recorded.

Note: Clear the values, using an RS-232C command or the Factory Menu.
There are two types of hour meters. Do not take the MR hour meter for the hour meter.

Using an RS-232C command

To acquire the accumulated power-on time of the product itself, use the "GS2" RS-232C command.

1 To clear the data on the hour meter (for the Panel) : CHM
2 To clear the data on the pulse meter : CPM
3 To clear the data on the SD history : CSD
4 To clear the data on the PD history : CPD

Using the Factory Menu

See "7.1.7 HOW TO CLEAR HISTORY DATA."

■ Conversion charts for electronic VRs: Conversion chart for the Vofs

Conversion chart for the Vofs (Commands vs. Common voltage values for the 50-inch and 43-inch models)

Command	Voltage value [V] for common sizes	Command	Voltage value [V] for common sizes	Command	Voltage value [V] for common sizes	Command	Voltage value [V] for common sizes	Command	Voltage value [V] for common sizes
VOF000	14.09	VOF056	24.55	VOF112	35.01	VOF168	45.47	VOF224	55.93
VOF001	14.28	VOF057	24.74	VOF113	35.20	VOF169	45.66	VOF225	56.12
VOF002	14.46	VOF058	24.92	VOF114	35.38	VOF170	45.85	VOF226	56.31
VOF003	14.65	VOF059	25.11	VOF115	35.57	VOF171	46.03	VOF227	56.49
VOF004	14.84	VOF060	25.30	VOF116	35.76	VOF172	46.22	VOF228	56.68
VOF005	15.02	VOF061	25.48	VOF117	35.95	VOF173	46.41	VOF229	56.87
VOF006	15.21	VOF062	25.67	VOF118	36.13	VOF174	46.59	VOF230	57.05
VOF007	15.40	VOF063	25.86	VOF119	36.32	VOF175	46.78	VOF231	57.24
VOF008	15.58	VOF064	26.04	VOF120	36.51	VOF176	46.97	VOF232	57.43
VOF009	15.77	VOF065	26.23	VOF121	36.69	VOF177	47.15	VOF233	57.61
VOF010	15.96	VOF066	26.42	VOF122	36.88	VOF178	47.34	VOF234	57.80
VOF011	16.14	VOF067	26.61	VOF123	37.07	VOF179	47.53	VOF235	57.99
VOF012	16.33	VOF068	26.79	VOF124	37.25	VOF180	47.71	VOF236	58.17
VOF013	16.52	VOF069	26.98	VOF125	37.44	VOF181	47.90	VOF237	58.36
VOF014	16.70	VOF070	27.17	VOF126	37.63	VOF182	48.09	VOF238	58.55
VOF015	16.89	VOF071	27.35	VOF127	37.81	VOF183	48.27	VOF239	58.73
VOF016	17.08	VOF072	27.54	VOF128	38.00	VOF184	48.46	VOF240	58.92
VOF017	17.27	VOF073	27.73	VOF129	38.19	VOF185	48.65	VOF241	59.11
VOF018	17.45	VOF074	27.91	VOF130	38.37	VOF186	48.83	VOF242	59.30
VOF019	17.64	VOF075	28.10	VOF131	38.56	VOF187	49.02	VOF243	59.48
VOF020	17.83	VOF076	28.29	VOF132	38.75	VOF188	49.21	VOF244	59.67
VOF021	18.01	VOF077	28.47	VOF133	38.93	VOF189	49.39	VOF245	59.86
VOF022	18.20	VOF078	28.66	VOF134	39.12	VOF190	49.58	VOF246	60.04
VOF023	18.39	VOF079	28.85	VOF135	39.31	VOF191	49.77	VOF247	60.23
VOF024	18.57	VOF080	29.03	VOF136	39.49	VOF192	49.96	VOF248	60.42
VOF025	18.76	VOF081	29.22	VOF137	39.68	VOF193	50.14	VOF249	60.60
VOF026	18.95	VOF082	29.41	VOF138	39.87	VOF194	50.33	VOF250	60.79
VOF027	19.13	VOF083	29.59	VOF139	40.05	VOF195	50.52	VOF251	60.98
VOF028	19.32	VOF084	29.78	VOF140	40.24	VOF196	50.70	VOF252	61.16
VOF029	19.51	VOF085	29.97	VOF141	40.43	VOF197	50.89	VOF253	61.35
VOF030	19.69	VOF086	30.15	VOF142	40.62	VOF198	51.08	VOF254	61.54
VOF031	19.88	VOF087	30.34	VOF143	40.80	VOF199	51.26	VOF255	61.72
VOF032	20.07	VOF088	30.53	VOF144	40.99	VOF200	51.45		
VOF033	20.25	VOF089	30.71	VOF145	41.18	VOF201	51.64		
VOF034	20.44	VOF090	30.90	VOF146	41.36	VOF202	51.82		
VOF035	20.63	VOF091	31.09	VOF147	41.55	VOF203	52.01		
VOF036	20.81	VOF092	31.28	VOF148	41.74	VOF204	52.20		
VOF037	21.00	VOF093	31.46	VOF149	41.92	VOF205	52.38		
VOF038	21.19	VOF094	31.65	VOF150	42.11	VOF206	52.57		
VOF039	21.37	VOF095	31.84	VOF151	42.30	VOF207	52.76		
VOF040	21.56	VOF096	32.02	VOF152	42.48	VOF208	52.94		
VOF041	21.75	VOF097	32.21	VOF153	42.67	VOF209	53.13		
VOF042	21.94	VOF098	32.40	VOF154	42.86	VOF210	53.32		
VOF043	22.12	VOF099	32.58	VOF155	43.04	VOF211	53.50		
VOF044	22.31	VOF100	32.77	VOF156	43.23	VOF212	53.69		
VOF045	22.50	VOF101	32.96	VOF157	43.42	VOF213	53.88		
VOF046	22.68	VOF102	33.14	VOF158	43.60	VOF214	54.06		
VOF047	22.87	VOF103	33.33	VOF159	43.79	VOF215	54.25		
VOF048	23.06	VOF104	33.52	VOF160	43.98	VOF216	54.44		
VOF049	23.24	VOF105	33.70	VOF161	44.16	VOF217	54.63		
VOF050	23.43	VOF106	33.89	VOF162	44.35	VOF218	54.81		
VOF051	23.62	VOF107	34.08	VOF163	44.54	VOF219	55.00		
VOF052	23.80	VOF108	34.26	VOF164	44.72	VOF220	55.19		
VOF053	23.99	VOF109	34.45	VOF165	44.91	VOF221	55.37		
VOF054	24.18	VOF110	34.64	VOF166	45.10	VOF222	55.56		
VOF055	24.36	VOF111	34.82	VOF167	45.29	VOF223	55.75		

■ Conversion charts for electronic VRs: Conversion chart for the Vyprst (1/2)

Conversion chart for the Vyprst (Commands vs. Voltage values for the 50-inch and 43-inch models)

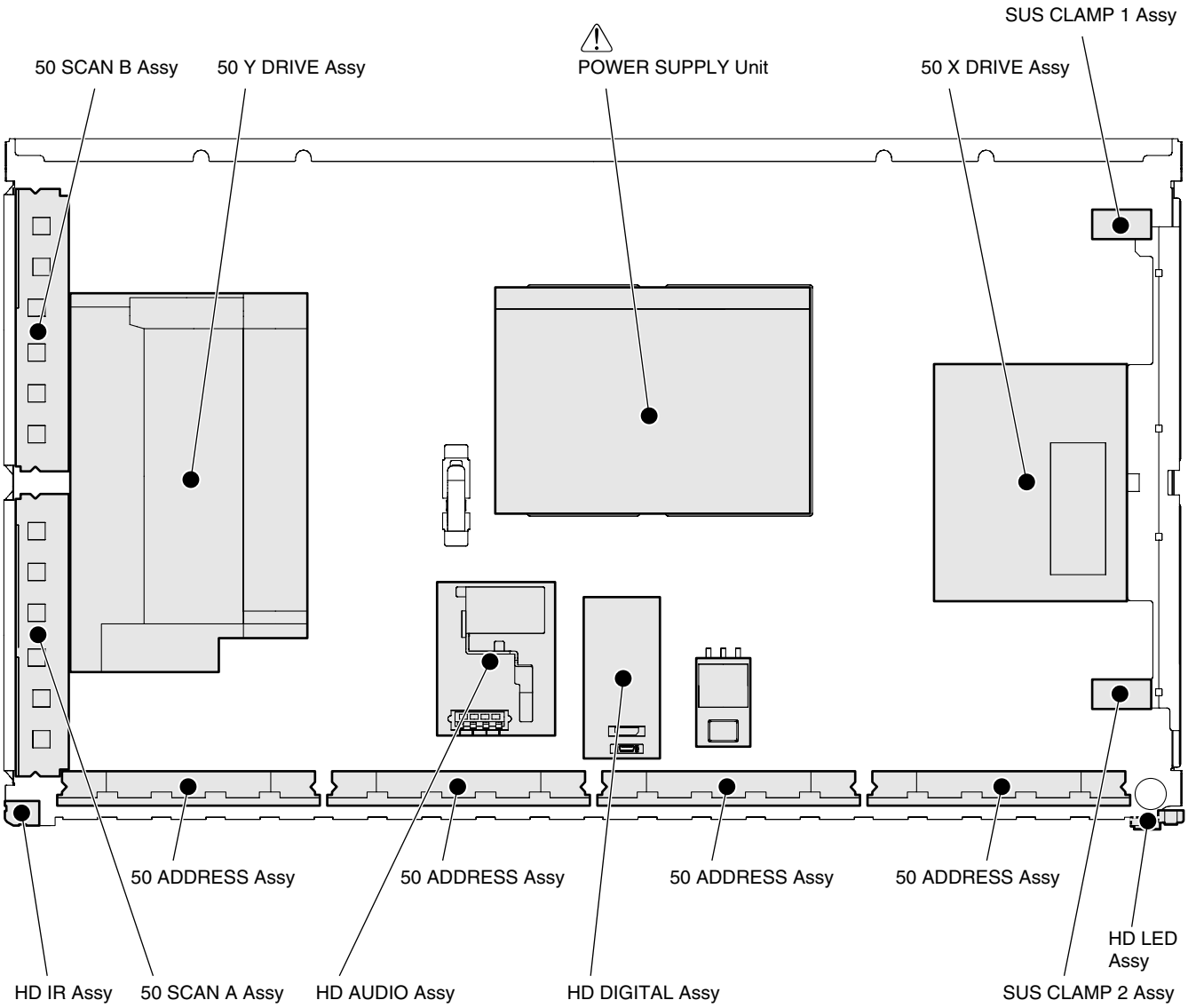
Command	Voltage [V]		Command	Voltage [V]		Command	Voltage [V]	
	50-inch Model	43-inch Model		50-inch Model	43-inch Model		50-inch Model	43-inch Model
VRP000	246.3	236.3	VRP056	270.6	260.6	VRP112	294.9	284.9
VRP001	246.7	236.7	VRP057	271.0	261.0	VRP113	295.4	285.4
VRP002	247.1	237.1	VRP058	271.5	261.5	VRP114	295.8	285.8
VRP003	247.6	237.6	VRP059	271.9	261.9	VRP115	296.2	286.2
VRP004	248.0	238.0	VRP060	272.3	262.3	VRP116	296.7	286.7
VRP005	248.4	238.4	VRP061	272.8	262.8	VRP117	297.1	287.1
VRP006	248.9	238.9	VRP062	273.2	263.2	VRP118	297.5	287.5
VRP007	249.3	239.3	VRP063	273.6	263.6	VRP119	298.0	288.0
VRP008	249.7	239.7	VRP064	274.1	264.1	VRP120	298.4	288.4
VRP009	250.2	240.2	VRP065	274.5	264.5	VRP121	298.8	288.8
VRP010	250.6	240.6	VRP066	274.9	264.9	VRP122	299.3	289.3
VRP011	251.0	241.0	VRP067	275.4	265.4	VRP123	299.7	289.7
VRP012	251.5	241.5	VRP068	275.8	265.8	VRP124	300.1	290.1
VRP013	251.9	241.9	VRP069	276.2	266.2	VRP125	300.6	290.6
VRP014	252.4	242.4	VRP070	276.7	266.7	VRP126	301.0	291.0
VRP015	252.8	242.8	VRP071	277.1	267.1	VRP127	301.4	291.4
VRP016	253.2	243.2	VRP072	277.5	267.5	VRP128	301.9	291.9
VRP017	253.7	243.7	VRP073	278.0	268.0	VRP129	302.3	292.3
VRP018	254.1	244.1	VRP074	278.4	268.4	VRP130	302.7	292.7
VRP019	254.5	244.5	VRP075	278.9	268.9	VRP131	303.2	293.2
VRP020	255.0	245.0	VRP076	279.3	269.3	VRP132	303.6	293.6
VRP021	255.4	245.4	VRP077	279.7	269.7	VRP133	304.0	294.0
VRP022	255.8	245.8	VRP078	280.2	270.2	VRP134	304.5	294.5
VRP023	256.3	246.3	VRP079	280.6	270.6	VRP135	304.9	294.9
VRP024	256.7	246.7	VRP080	281.0	271.0	VRP136	305.3	295.3
VRP025	257.1	247.1	VRP081	281.5	271.5	VRP137	305.8	295.8
VRP026	257.6	247.6	VRP082	281.9	271.9	VRP138	306.2	296.2
VRP027	258.0	248.0	VRP083	282.3	272.3	VRP139	306.7	296.7
VRP028	258.4	248.4	VRP084	282.8	272.8	VRP140	307.1	297.1
VRP029	258.9	248.9	VRP085	283.2	273.2	VRP141	307.5	297.5
VRP030	259.3	249.3	VRP086	283.6	273.6	VRP142	308.0	298.0
VRP031	259.7	249.7	VRP087	284.1	274.1	VRP143	308.4	298.4
VRP032	260.2	250.2	VRP088	284.5	274.5	VRP144	308.8	298.8
VRP033	260.6	250.6	VRP089	284.9	274.9	VRP145	309.3	299.3
VRP034	261.0	251.0	VRP090	285.4	275.4	VRP146	309.7	299.7
VRP035	261.5	251.5	VRP091	285.8	275.8	VRP147	310.1	300.1
VRP036	261.9	251.9	VRP092	286.2	276.2	VRP148	310.6	300.6
VRP037	262.3	252.3	VRP093	286.7	276.7	VRP149	311.0	301.0
VRP038	262.8	252.8	VRP094	287.1	277.1	VRP150	311.4	301.4
VRP039	263.2	253.2	VRP095	287.5	277.5	VRP151	311.9	301.9
VRP040	263.6	253.6	VRP096	288.0	278.0	VRP152	312.3	302.3
VRP041	264.1	254.1	VRP097	288.4	278.4	VRP153	312.7	302.7
VRP042	264.5	254.5	VRP098	288.8	278.8	VRP154	313.2	303.2
VRP043	264.9	254.9	VRP099	289.3	279.3	VRP155	313.6	303.6
VRP044	265.4	255.4	VRP100	289.7	279.7	VRP156	314.0	304.0
VRP045	265.8	255.8	VRP101	290.1	280.1	VRP157	314.5	304.5
VRP046	266.3	256.3	VRP102	290.6	280.6	VRP158	314.9	304.9
VRP047	266.7	256.7	VRP103	291.0	281.0	VRP159	315.3	305.3
VRP048	267.1	257.1	VRP104	291.4	281.4	VRP160	315.8	305.8
VRP049	267.6	257.6	VRP105	291.9	281.9	VRP161	316.2	306.2
VRP050	268.0	258.0	VRP106	292.3	282.3	VRP162	316.6	306.6
VRP051	268.4	258.4	VRP107	292.8	282.8	VRP163	317.1	307.1
VRP052	268.9	258.9	VRP108	293.2	283.2	VRP164	317.5	307.5
VRP053	269.3	259.3	VRP109	293.6	283.6	VRP165	317.9	307.9
VRP054	269.7	259.7	VRP110	294.1	284.1	VRP166	318.4	308.4
VRP055	270.2	260.2	VRP111	294.5	284.5	VRP167	318.8	308.8

■ Conversion charts for electronic VRs: Conversion chart for the Vyprst (2/2)

Conversion chart for the Vyprst (Commands vs. Voltage values for the 50-inch and 43-inch models)

Command	Voltage [V]		Command	Voltage [V]	
	50-inch Model	43-inch Model		50-inch Model	43-inch Model
VRP168	319.2	309.2	VRP224	343.6	333.6
VRP169	319.7	309.7	VRP225	344.0	334.0
VRP170	320.1	310.1	VRP226	344.4	334.4
VRP171	320.6	310.6	VRP227	344.9	334.9
VRP172	321.0	311.0	VRP228	345.3	335.3
VRP173	321.4	311.4	VRP229	345.7	335.7
VRP174	321.9	311.9	VRP230	346.2	336.2
VRP175	322.3	312.3	VRP231	346.6	336.6
VRP176	322.7	312.7	VRP232	347.1	337.1
VRP177	323.2	313.2	VRP233	347.5	337.5
VRP178	323.6	313.6	VRP234	347.9	337.9
VRP179	324.0	314.0	VRP235	348.4	338.4
VRP180	324.5	314.5	VRP236	348.8	338.8
VRP181	324.9	314.9	VRP237	349.2	339.2
VRP182	325.3	315.3	VRP238	349.7	339.7
VRP183	325.8	315.8	VRP239	350.1	340.1
VRP184	326.2	316.2	VRP240	350.5	340.5
VRP185	326.6	316.6	VRP241	351.0	341.0
VRP186	327.1	317.1	VRP242	351.4	341.4
VRP187	327.5	317.5	VRP243	351.8	341.8
VRP188	327.9	317.9	VRP244	352.3	342.3
VRP189	328.4	318.4	VRP245	352.7	342.7
VRP190	328.8	318.8	VRP246	353.1	343.1
VRP191	329.2	319.2	VRP247	353.6	343.6
VRP192	329.7	319.7	VRP248	354.0	344.0
VRP193	330.1	320.1	VRP249	354.4	344.4
VRP194	330.5	320.5	VRP250	354.9	344.9
VRP195	331.0	321.0	VRP251	355.3	345.3
VRP196	331.4	321.4	VRP252	355.7	345.7
VRP197	331.8	321.8	VRP253	356.2	346.2
VRP198	332.3	322.3	VRP254	356.6	346.6
VRP199	332.7	322.7	VRP255	357.0	347.0
VRP200	333.2	323.2			
VRP201	333.6	323.6			
VRP202	334.0	324.0			
VRP203	334.5	324.5			
VRP204	334.9	324.9			
VRP205	335.3	325.3			
VRP206	335.8	325.8			
VRP207	336.2	326.2			
VRP208	336.6	326.6			
VRP209	337.1	327.1			
VRP210	337.5	327.5			
VRP211	337.9	327.9			
VRP212	338.4	328.4			
VRP213	338.8	328.8			
VRP214	339.2	329.2			
VRP215	339.7	329.7			
VRP216	340.1	330.1			
VRP217	340.5	330.5			
VRP218	341.0	331.0			
VRP219	341.4	331.4			
VRP220	341.8	331.8			
VRP221	342.3	332.3			
VRP222	342.7	332.7			
VRP223	343.1	333.1			

7. GENERAL INFORMATION
7.1 DIAGNOSIS
7.1.1 PCB LOCATION



7.1.2 DIAGNOSIS OF SHUTDOWN/POWER-DOWN INDICATED BY LEDS

• Operation statuses indicated by LEDs

Status	LED Pattern			
Standby	1	Lit in Red	Blue Red	
Power ON	2	Lit in Blue	Blue Red	
AC Power OFF of one side	3	Red flashes (1000ms)	Blue Red	1000ms
System cable disconnection	4	Red and blue flash (1000ms)	Blue Red	1000ms 1000ms
Power-down	5	Red flashes (500+2500ms)	Blue Red	Once Twice n times 2.5s Once 500ms
Shutdown	6	Blue flashes (500+2500ms)	Blue Red	500ms Once Twice n times 2.5s Once
No backup copy	7	Lit in Red and blue flashes (200ms)	Blue Red	200ms

: Lit in Red LED
: Lit in Blue LED

• PD (power-down) count

1	Not used
2	POWER SUPPLY Unit
3	SCAN Assy
4	5V power supply for SCAN
5	Y-DRIVE (Not used)
6	DCDC for Y drive
7	Y-SUS
8	ADDRESS Assy
9	X-DRIVE
10	DCDC for X drive
11	X-SUS
12	Not used
13	Sequence drive stop
14	Not used
15	UNKNOWN

Note:
- When a shutdown occurs, a warning will be issued by the Media Receiver and displayed, then the power will be shut off.
- When a shutdown or power-down occurs on the Panel side, the Media Receiver will enter Standby mode (the red LED will light).

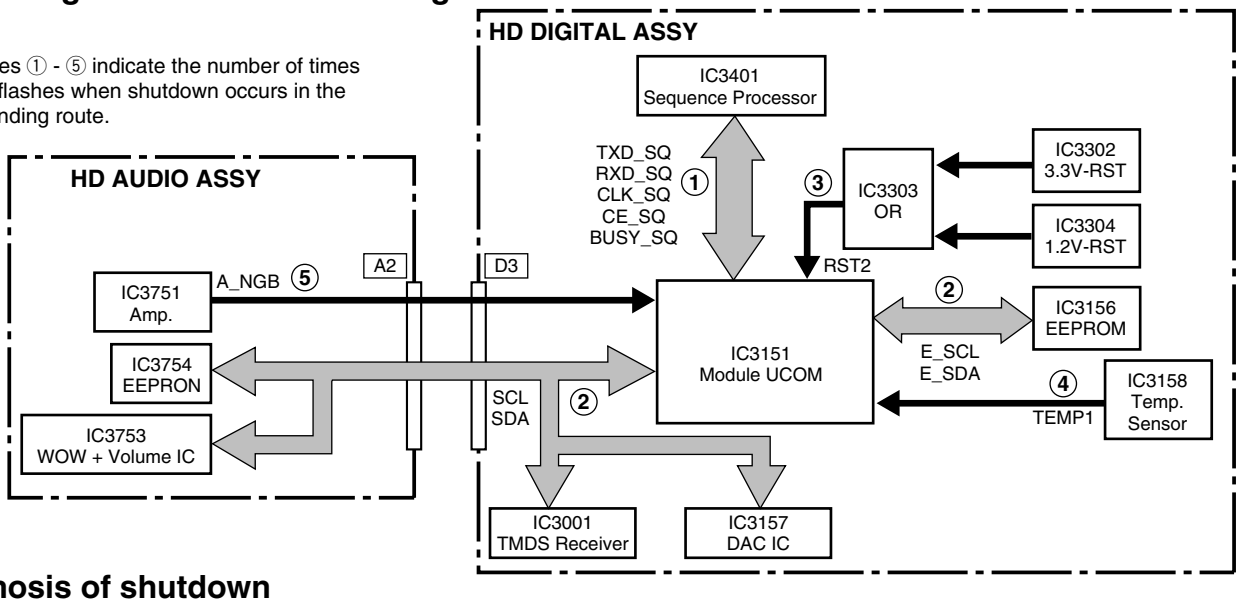
• SD (shut down) count

1	SEQUENCE PROCESSOR (SQ_IC)
2	MDU-IIC
3	RST2 abnormality
4	Panel high temperature
5	Speaker short-circuit *

* When a jumper (J105) between the HD AUDIO Assy and the POWER SUPPLY Unit is disconnected, the SD LED flashes five times in this manner.

• Block diagram of the shutdown signal

Note:
The figures ① - ⑤ indicate the number of times the LED flashes when shutdown occurs in the corresponding route.



• Diagnosis of shutdown

Number of flashes	SD Circuit in Operation	Defective Assy	Reason for Shutdown	Point to be Checked	Possible Defective Part	Remarks
1 time	Communication failure of the driving processor	HD DIGITAL	Communication failure of IC3401	SQ ASIC BLOCK, PANEL FLASH BLOCK	IC3401, IC3301	
			Writing failure of IC3401			Check if version data can be read, using the "GS1" command, after the power is turned on again.
2 times	Communication failure of the IIC line (Check the SD subcategory on the Factory Menu.)	HD DIGITAL	Communication failure of the EEPROM (for retaining 4-Kbyte of data)	MODULE UCOM BLOCK	IC3156, IC3157	
				TMDS BLOCK	IC3001	
		HD AUDIO	Communication failure of the EEPROM (2-kbyte : for backup)	AUDIO AMP BLOCK	IC3754	
			Disconnection of connectors	A2 - D3		Check if the connectors are disconnected or are not connected securely.
			Defective volume IC	HD AUDIO Assy	IC3753	
3 times	Power failure of the driving processor (RST2)	HD DIGITAL	Defective DC-DC converter	DIGITAL DD CON BLOCK	U3601	Check if 3.3-V and 1.2-V power supplies are activated.
			Defective RST IC	PANEL FLASH BLOCK	IC3302 - IC3304	
			Defective IC3401	SQ ASIC BLOCK	IC3401	
		POWER SUPPLY	The 8-V power supply is not activated.			Check if the 8-V power is supplied at Pin 1 of the D11 connector.
4 times	Abnormally high temperature of the panel		Abnormally high temperature of the panel	Ambient temperature		The Panel will be shut down if the sensor detects temperature of 75°C or higher (for the PDP-436P/-506P).
5 times	Audio failure		Speakers' grounding fault	Speaker terminals		Check if the speaker cables are in contact with the chassis, etc.
		HD AUDIO	Defective AMP IC	HD AUDIO Assy	IC3751	
		HD AUDIO	Disconnection of connectors	A1 - P5		Check if the connectors are disconnected or are not connected securely.

• Power-down diagnosis (defective points)

Number of Blinks	PD Circuit in Operation	Defective PCB Assy	Reason for PD (Power-down)	Point to be Checked	Possible Defective Part	Remarks
2	POWER	POWER SUPPLY				
3	SCAN	50 (43) SCAN A, B	VH UVP	SCAN IC	SCAN IC	VH-GNDH short-circuit
		50 (43) Y DRIVE		Y SUS BLOCK	IC2252, IC2253	VSUS-SUSOUT, SUSOUT-SUSGND short-circuit
				VH DC/DC	IC2502, L2501	
			Disconnection of cable detected	CN2001, CN2350		
		50 (43) X DRIVE	VH UVP	IC1202	IC1202	VSUS-SUSOUT, SUSOUT-SUSGND short-circuit
4	SCN-5V	50 (43) SCAN A, B	Disconnection of cable detected	CN2401, CN2402		
		50 (43) Y DRIVE	IC5V UVP	SCAN IC	SCAN IC	
				IC5V DC/DC	Q2605, R2647	
				Y SUS BLOCK	R2352	
6	Y-DCDC	50 (43) Y DRIVE	VOFS UVP	VOFS DC/DC	Q2606, R2619, R2620	
				Y SUS BLOCK	IC2252, IC2253, Q2280, Q2281	MSKS-SUSOUT short-circuit
			Vprst UVP	Vprst Regulator	Q2531, Q2532, IC2535	
7	Y-SUS	50 (43) Y DRIVE	Power-down caused by detection of middle-point voltage	Y RESONANCE BLOCK	IC2101	
				Y SUS BLOCK	Q2221	
8	ADRS	50 (43) ADDRESS	Address power-down	ADDRESS RESONANCE BLOCK	D1634	V+ADR-GND_ADR short-circuit
			Disconnection of cable detected	CN1501, CN3501-CN3504		
9	XDRIVE	50 (43) X DRIVE	Disconnection of cable detected	CN1001		
10	X-DCDC	50 (43) X DRIVE	Disconnection of cable detected	CN1201		
			VRN UVP	VRN DC/DC	Q1323, R1332, R1333	
				X SUS BLOCK	R1204, Q1272	
11	X-SUS	50 (43) X DRIVE	Power-down caused by detection of middle-point voltage	X RESONANCE BLOCK	IC1101	

OVP : **O**VER **V**OLTAGE **P**ROTECT
UVP : **U**NDER **V**OLTAGE **P**ROTECT

7.1.3 OVERVIEW OF PANEL FACTORY MODE

■ Top screen of the Factory Menu for the main unit

MR INFORMATION

< MUTE > key

FUNC. CHECK

< MUTE > key

COMMON ADJ.

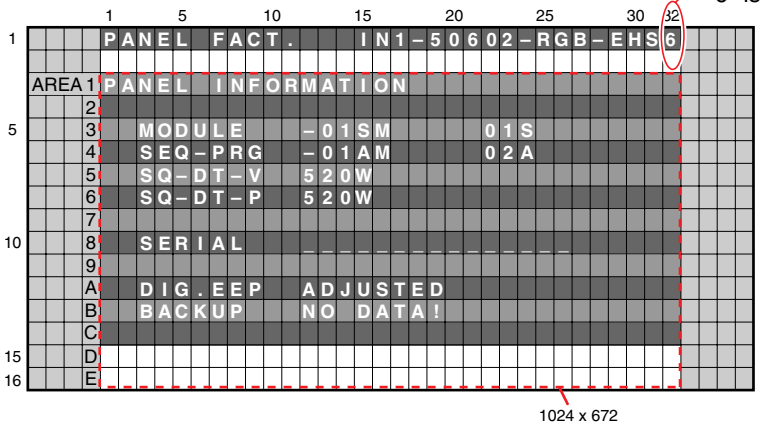
< MUTE > key

PANEL FACTORY

< SET > key

Top screen of the Panel Factory

If a Panel of Generation 6 is connected, "6" is indicated here.



Note: With this model, the structure of Factory mode has been changed, and all items related to the Panel are gathered into PANEL FACTORY mode.

Note: On-screen displays in Factory mode are indicated in white characters on a green background for the PDP-506HD/436HD and subsequent models.

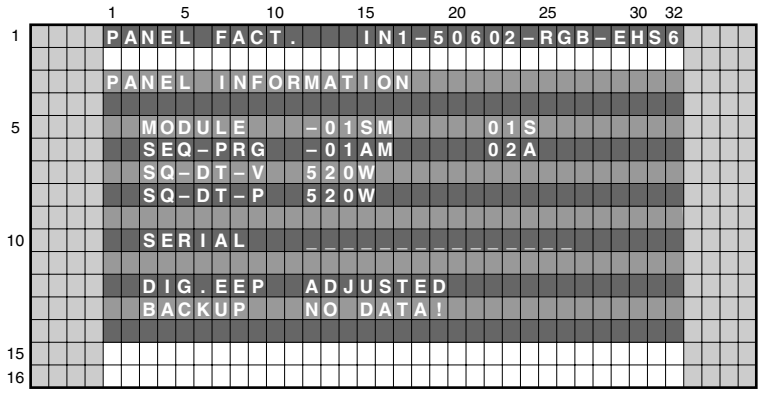
■ Configuration of Panel Factory mode

No.	Submode Name / Submode Items	Adjustable Range	Remarks
1	PANEL INFORMATION		
2	PANEL WORKS		
3	POWER DOWN		
4	SHUT DOWN		
5	PANEL-1 ADJ (+)		
5-1	X-SUS B <=>	120 to 136	Equivalent to XSB
5-2	Y-SUS B <=>	120 to 136	Equivalent to YSB
5-3	Y-SUSTAIL T <=>	120 to 136	Equivalent to YTG
5-4	Y-SUSTAIL W <=>	120 to 136	Equivalent to YTW
5-5	XY-RST W <=>	120 to 136	Equivalent to RSW
5-6	VOL SUS <=>	000 to 255	Equivalent to VSU
5-7	VOL OFFSET <=>	000 to 255	Equivalent to VOF
5-8	VOL RST P <=>	000 to 255	Equivalent to VRP
5-9	SUS FREQ. <=>	MODE1 to MODE8	Equivalent to SFR
6	PANEL-2 ADJ (+)		
6-1	R-HIGH <=>	000 to 511	Equivalent to PRH
6-2	G-HIGH <=>	000 to 511	Equivalent to PGH
6-3	B-HIGH <=>	000 to 511	Equivalent to PBH
6-4	R-LOW <=>	000 to 999	Equivalent to PRL
6-5	G-LOW <=>	000 to 999	Equivalent to PGL
6-6	B-LOW <=>	000 to 999	Equivalent to PBL
6-7	ABL <=>	000 to 255	Equivalent to ABL
7	PANEL REVISE		
7-1	R-LEVEL <=>	LV-0 to LV-7	Equivalent to RRL
7-2	G-LEVEL <=>	LV-0 to LV-7	Equivalent to RGL
7-3	B-LEVEL <=>	LV-0 to LV-7	Equivalent to RBL
8	ETC (+)		
8-1	BACKUP DATA <=>	NO OPRT<=>TRANSFER or ERR	Equivalent to BCP
8-2	DIGITAL EEPROM <=>	NO OPRT<=>DELETE/REPAIR	Equivalent to FAJ/UAJ
8-3	PD INFO. <=>	NO OPRT <=>CLEAR	Equivalent to CPD
8-4	SD INFO. <=>	NO OPRT <=>CLEAR	Equivalent to CSD
8-5	HR-MTR INFO. <=>	NO OPRT <=>CLEAR	Equivalent to CHM
8-6	PM/B1-B5 <=>	NO OPRT <=>CLEAR	Equivalent to CPM
8-7	P-COUNT INFO. <=>	NO OPRT <=>CLEAR	Equivalent to CPC
9	MASK SETUP (+)		
9-1	MASK OFF		Equivalent to MKS+S00
9-2	SGL MASK 01 <=>	<=>V48<=>V50<=>V60<=>P60<=>P70<=>V72<=>V75<=> (Select each sequence.)	Equivalent to MKS+S01
9-3	SGL MASK 02 <=>		Equivalent to MKS+S02
	• • •		• • •
9-62	CMB MASK 08 <=>		Equivalent to MKC+S08
9-63	CMB MASK 09 <=>		Equivalent to MKC+S09

■ Details on submodes related to the panel

The GUI display examples here are those displayed when the main unit is used with the 50-inch model.

1. PANEL INFORMATION



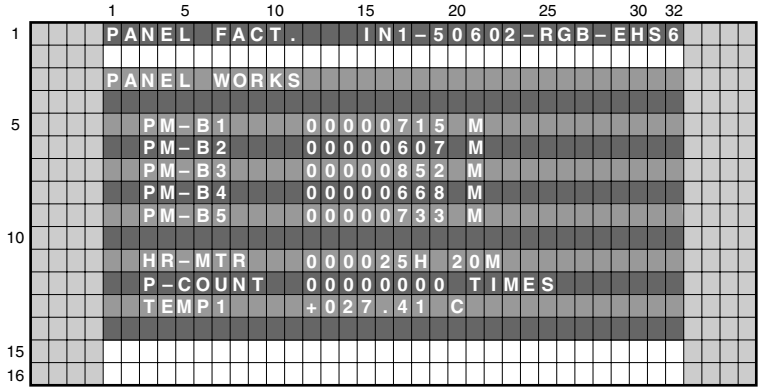
■ Key operation

<DOWN> : Shifting to PANEL WORKS
<UP> : Shifting to MASK SETUP (+)
<SEL> : MASK ON/OFF
<L/R> : Updating displayed information

The version of the microcomputer of the panel, serial number of the main unit, adjustment values of the main unit, and backup status are displayed.

2. PANEL WORKS

Note:
Screen display " PANEL_FACT.___IN1-50602-RGB-EHS6".
Refer to service manual of Media Receiver.

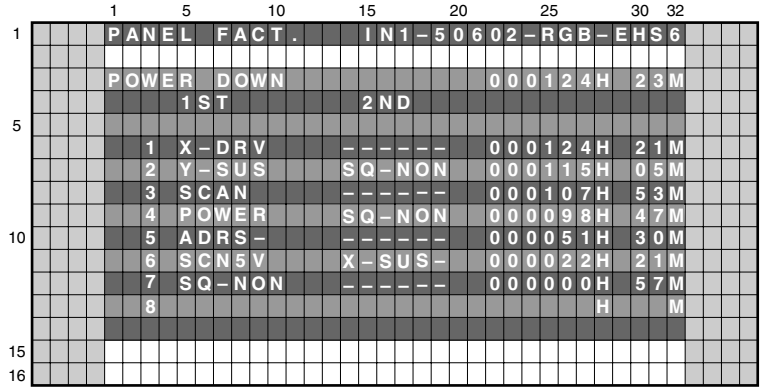


■ Key operation

<DOWN> : Shifting to POWER DOWN
<UP> : Shifting to PANEL INFORMATION
<SEL> : MASK ON/OFF
<L/R> : Updating displayed information

- The data from the pulse meter for each block from PM-B1 to PM-B5 are indicated. The values stored in the EEPROM (3 bytes each) are each converted into a decimal number, and the higher-order 8 digits are displayed (that means that the lowest-order digit represents millions).
- TEMP1: Indicates the temperature of the panel. By your pressing the L or R key, the temperature value can be updated.

3. POWER DOWN



■ Key operation

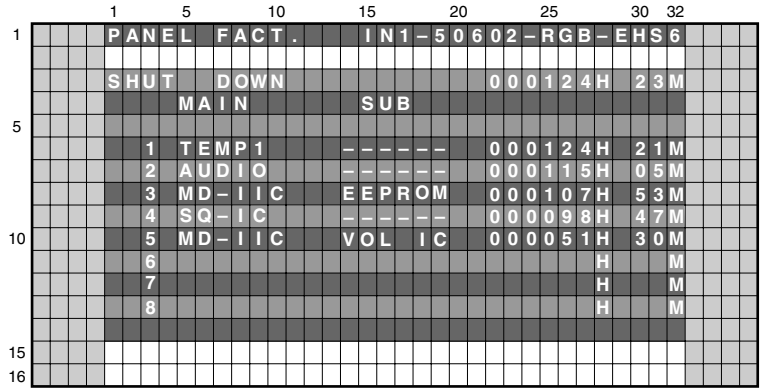
<DOWN> : Shifting to SHUTDOWN
<UP> : Shifting to PANEL WORKS
<SEL> : MASK ON/OFF
<L/R> : Updating displayed information

• Basically, data acquired with the command QPD are displayed in the columns "1ST" and "2ND, with the values from the hour meter when the power-down occurred.

<Causes of power-down and corresponding OSD indications>

Cause of power-down	OSD Indication	Cause of power-down	OSD Indication
POWER SUPPLY Unit	P-PWR	ADDRESS Assy	ADRS
SCAN Assy	SCAN	X-DRIVE Assy	X-DRV
5V power for SCAN	SCN5V	DCDC for X drive	X-DCDC
Not used		X-SUS	X-SUS
DCDC for Y drive	Y-DCDC	Sequence drive stopped	SQ-NON
Y-SUS	Y-SUS	Specification inability	UNKNOW

4. SHUT DOWN



■ Key operation

<DOWN> : Shifting to PANEL-2ADJ (+)
<UP> : Shifting to POWER DOWN
<SEL> : MASK ON/OFF
<L/R> : Updating displayed information

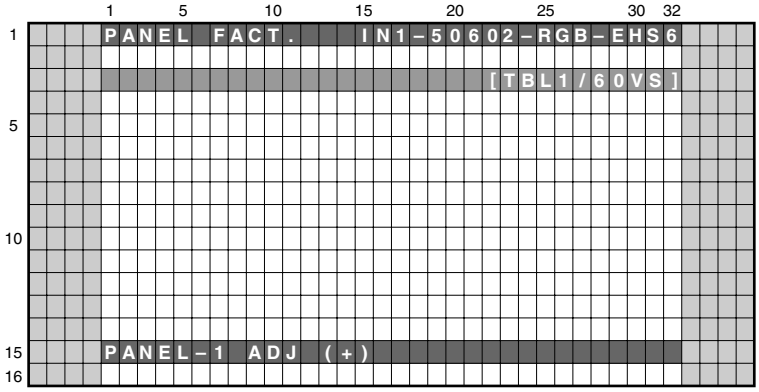
• Basically, data acquired with the command QSD (for MDU-IIC, subcategory data are also displayed) are displayed with the values from the hour meter when the shutdown occurred.

<Causes of shutdown and corresponding OSD indications>

Cause of shutdown (main)	OSD Indication
SEQUENCE PROCESSOR	SQ-IC
MDU-IIC	MDU-IIC (with subcategory)
Abnormality in RST2	RST2
Panel having high temperature	TEMP1
Short-circuited speaker	AUDIO

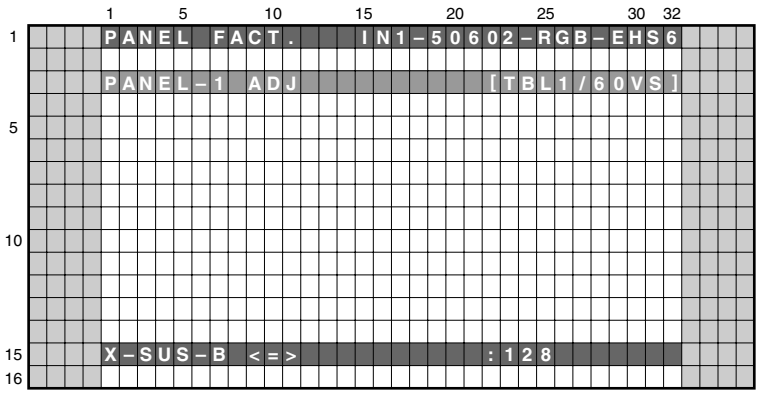
Cause of shutdown (sub)	OSD Indication
EEPROM	EEPROM (IC3156)
BACKUP	BACKUP (IC3754)
DAC	DAC (IC3302 to IC3304)
Audio IC	VOL-IC (IC3158)
DVI	DVI

5. PANEL-1 ADJ



■ Key operation

<DOWN> : Shifting to PANEL-2 ADJ (+)
<UP> : Shifting to POWER DOWN
<SET> : Shifting to the next nested layer
<SEL> : MASK ON/OFF



■ Key operation

<DOWN> : Shifting to the next item
<UP> : Shifting to the previous item
<RIGHT> : Adding by one to the adjustment value
<LEFT> : Subtracting by one from the adjustment value
<VOL+> : Adding by 10 to the adjustment value
<VOL-> : Subtracting by 10 from the adjustment value
<SET> : Determining the adjustment value and shifting to the upper layer
<SEL> : MASK ON/OFF

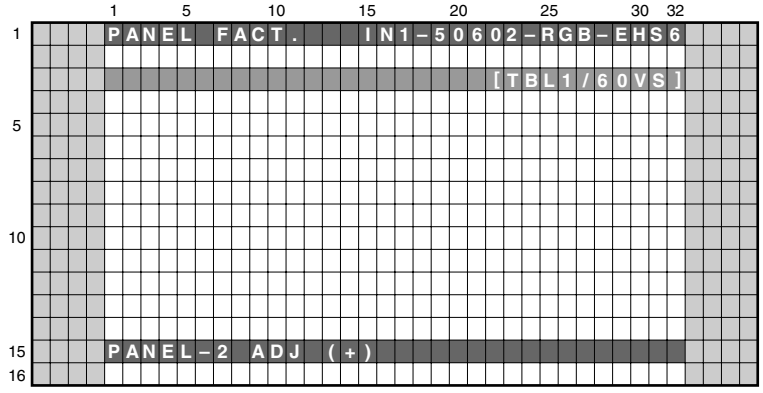
<Drive-sequence indications and indications for the ABL/WB tables>
(The OSD indications are displayed at the right part of the third line for submode PANEL-1 ADJ and subsequent submodes.)

Type of WB/ABL Tables		Type of Drive Sequences					
		Standard Video/MASK ON		Nonstandard Video		PC	
TBL1		48VS		---		60PS	Not used for consumer products
TBL2		50VS		50VN		70PS	
TBL3		60VS		60VN			
TBL4		72VS	Only Mask indication	---			
		75VS		75VN			

<Lower-layer items of PANEL-1 ADJ>

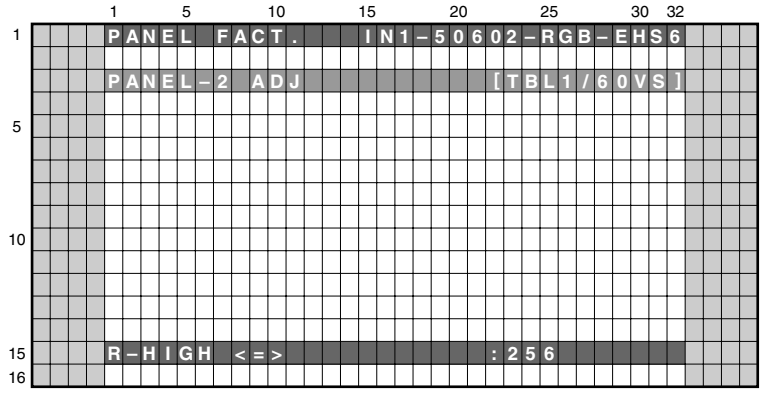
No.	Items	Adjustment/Setting Value	Remarks
1	X-SUS B <=>	120 to 136	Equivalent to XSB
2	Y-SUS B <=>	120 to 136	Equivalent to YSB
3	Y-SUSTAIL T <=>	120 to 136	Equivalent to YTG
4	Y-SUSTAIL W <=>	120 to 136	Equivalent to YTW
5	XY-RST W <=>	120 to 136	Equivalent to RSW
6	VOL SUS <=>	000 to 255	Equivalent to VSU
7	VOL OFFSET <=>	000 to 255	Equivalent to VOF
8	VOL RST P <=>	000 to 255	Equivalent to VRP
9	SUS FREQ. <=>	<=>MODE1 to MODE8<=>	Equivalent to SFR

6. PANEL-2 ADJ



■ Key operation

<DOWN> : Shifting to PANEL REVISE
<UP> : Shifting to PANEL-1 ADJ (+)
<SEL> : MASK ON/OFF
<SET> : Shifting to the next nested layer



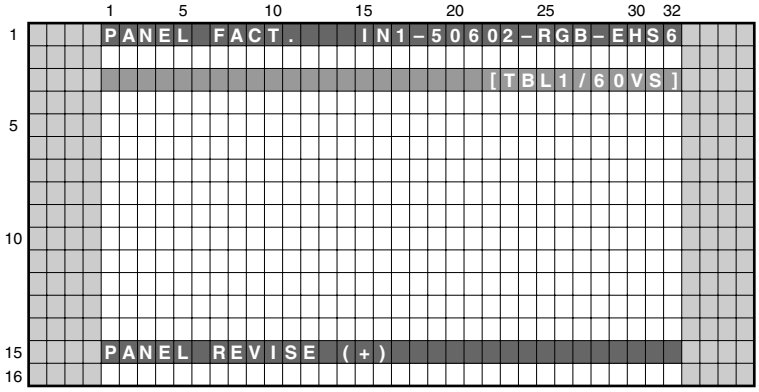
■ Key operation

<DOWN> : Shifting to the next item
<UP> : Shifting to the previous item
<RIGHT> : Adding by one to the adjustment value
<LEFT> : Subtracting by one from the adjustment value
<VOL+> : Adding by 10 to the adjustment value
<VOL-> : Subtracting by 10 from the adjustment value
<SET> : Determining the adjustment value and shifting to the upper layer
<SEL> : MASK ON/OFF

<Lower-layer items of PANEL-2 ADJ>

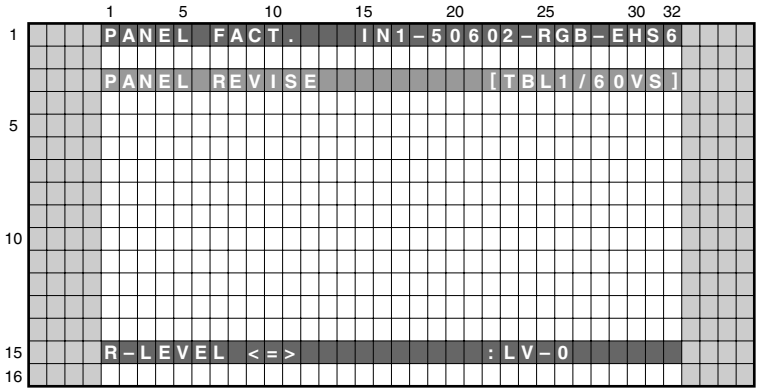
No.	Items	Adjustment/Setting Value	Remarks
1	R-HIGH <=>	000 to 511	Equivalent to PRH
2	G-HIGH <=>	000 to 511	Equivalent to PGH
3	B-HIGH <=>	000 to 511	Equivalent to PBH
4	R-LOW <=>	000 to 999	Equivalent to PRL
5	G-LOW <=>	000 to 999	Equivalent to PGL
6	B-LOW <=>	000 to 999	Equivalent to PBL
7	ABL <=>	000 to 255	Equivalent to ABL

7. PANEL REVISE



■ Key operation

<DOWN> : Shifting to ETC.(+)
<UP> : Shifting to PANEL-2 ADJ (+)
<SEL> : MASK ON/OFF
<SET> : Shifting to the next nested layer



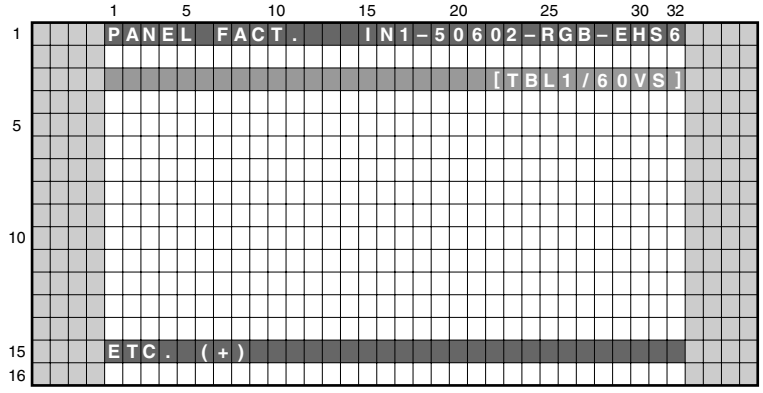
■ Key operation

<DOWN> : Shifting to the next item
<UP> : Shifting to the previous item
<RIGHT> : Adding by one to the adjustment value
<LEFT> : Subtracting by one from the adjustment value
<VOL+> : Adding by 10 to the adjustment value
<VOL-> : Subtracting by 10 from the adjustment value
<SET> : Determining the setting value and shifting to the upper layer
<SEL> : MASK ON/OFF

<Lower-layer items of PANEL REVISE>

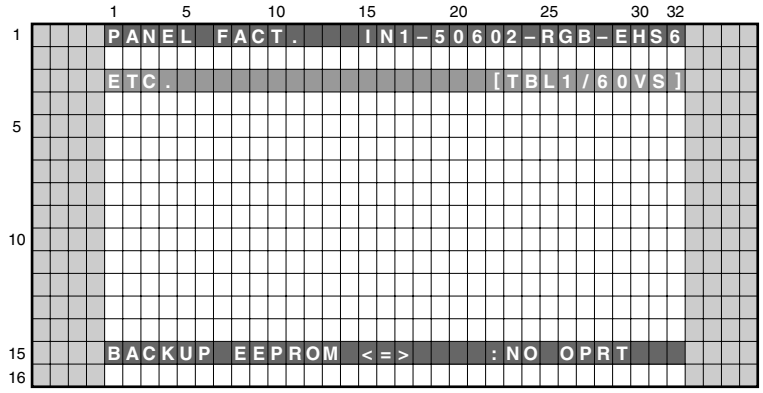
No.	Items	Adjustment/Setting Value	Remarks
1	R-LEVEL <=>	<=>LV-0 to LV-7<=>	Equivalent to RRL
2	G-LEVEL <=>	<=>LV-0 to LV-7<=>	Equivalent to RGL
3	B-LEVEL <=>	<=>LV-0 to LV-7<=>	Equivalent to RBL

8. ETC.



■ Key operation

<DOWN> : Shifting to MASK SETUP (+)
<UP> : Shifting to PANEL REVISE (+)
<SEL> : MASK ON/OFF
<SET> : Shifting to the next nested layer



■ Key operation

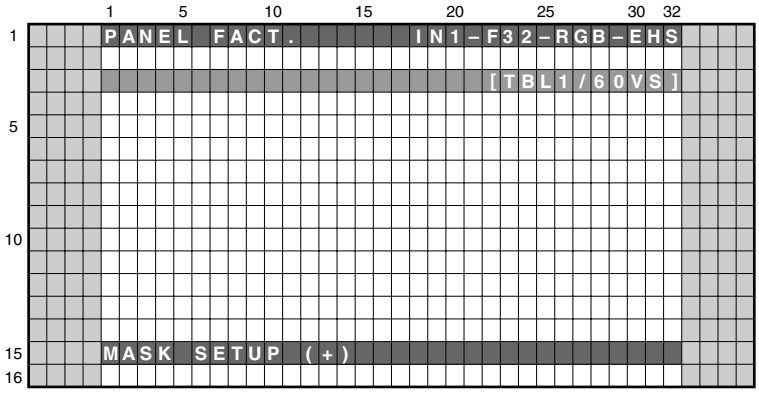
<DOWN> : Shifting to the next item
<UP> : Shifting to the previous item
<RIGHT> : Adding by one to the adjustment value
<LEFT> : Subtracting by one from the adjustment value
<SET> : Determining the setting value and shifting to the upper layer
<SEL> : MASK ON/OFF

<Lower-layer items of ETC.>

No.	Items	Adjustment/Setting Value	Remarks
1	BACKUP DATA <=>	<=>NO OPRT<=>TRANSFER<=>	"ERR" is indicated when no data are in the backup EEPROM. To activate the option to select TRANSFER, press the SET key about 5 seconds. (There is a situation resting more than 5 seconds.)
2	DIGITAL EEPROM <=>	<=>NO OPRT<=>REPAIR/DELETE<=>	"DELETE" is indicated when the main unit has been already adjusted. To activate the option to select REPAIR/DELETE, press the SET key about 5 seconds. (There is a situation resting more than 5 seconds.)
3	PD INFO. <=>	<=>NO OPRT<=>CLEAR<=>	To activate the option to select CLEAR, repeatedly press the SET key about 5 seconds. (There is a situation resting more than 5 seconds.)
4	SD INFO. <=>	<=>NO OPRT<=>CLEAR<=>	
5	HR-MTR INFO. <=>	<=>NO OPRT<=>CLEAR<=>	
6	PM/B1-B5 <=>	<=>NO OPRT<=>CLEAR<=>	
7	P-COUNT INFO. <=>	<=>NO OPRT<=>CLEAR<=>	

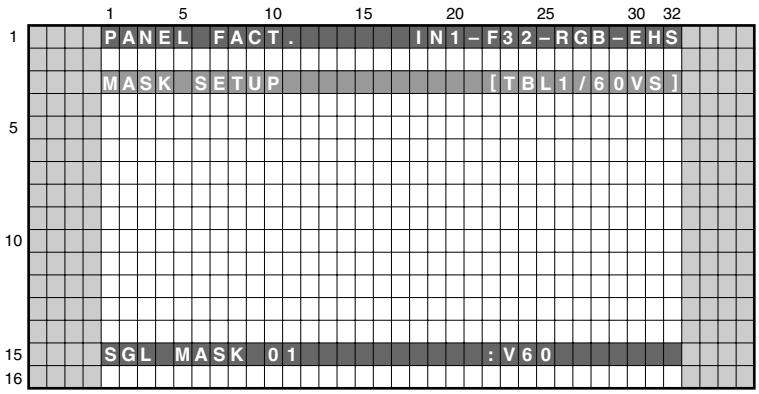
- "NO OPRT" is selected when this submode is entered (to avoid accidental misoperation).
- When each item is set, the process starts then the unit shifts to the upper layer. (When NO OPRT is determined, the unit will shift to the upper layer without doing anything.)
- When data are set to be backed up, if the digital EEPROM has not been adjusted, do the operation of LED pattern No. 7.

9. MASK SETUP



■ Key operation

<DOWN> : Shifting to PANEL INFORMATION
<UP> : Shifting to ETC. (+)
<SEL> : MASK ON/OFF
<SET> : Shifting to the next nested layer



■ Key operation

<DOWN> : Shifting to the next MASK
<UP> : Shifting to the previous MASK
<RIGHT> : Changing MASK sequence (+)
<LEFT> : Changing MASK sequence (-)
<SET> : Determining the setting value and shifting to the upper layer
<SEL> : MASK ON/OFF

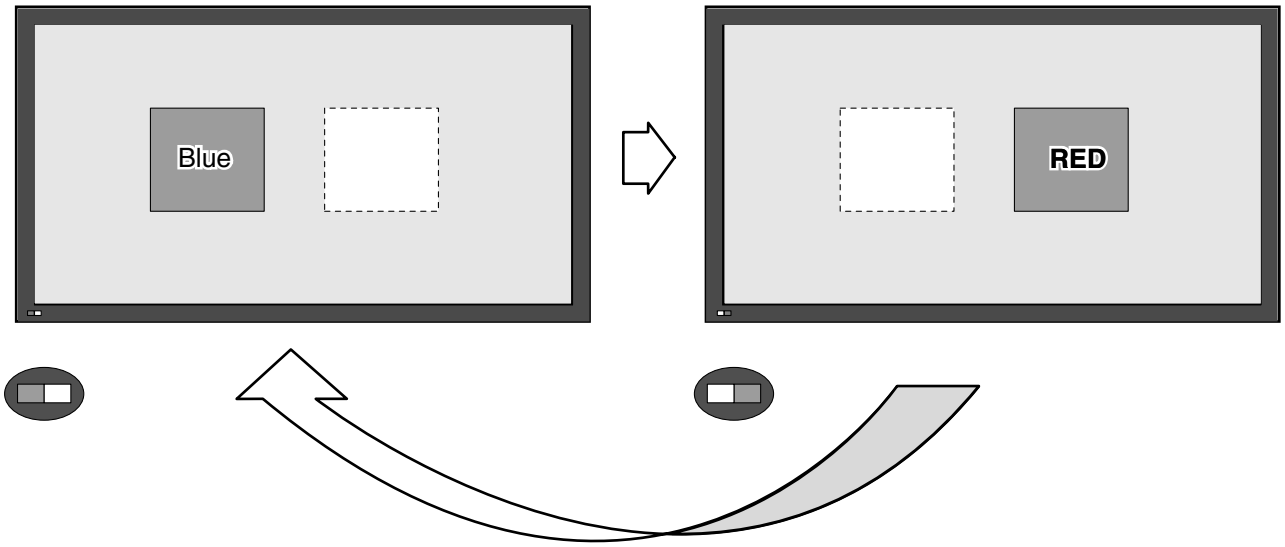
<Lower-layer items of MASK SETUP>

No.	Items	Adjustment/Setting Value	Remarks
1	MASK OFF		Equivalent to MKS+S00
2	SGL MASK 01 <=>	<=>48V<=>50V<=>60V<=> 60P<=>70P<=>72V<=>75V<=>	Equivalent to MKS+S01
3	SGL MASK 02 <=>		Equivalent to MKS+S02
4	• • •		• • •
5	CMB MASK 09 <=>		Equivalent to MKC+S08
6	CMB MASK 10 <=>		Equivalent to MKC+S09

• With the keys <LEFT> and <RIGHT>, the Panel drive sequence in the MASK indication is changed in the following way:
<=>48V<=>50V<=>60V<=>72V<=>75V<=>60P<=>70P<=>

7.1.4 OPERATION WHEN THE MEDIA RECEIVER IS NOT CONNECTED

As the connection conditions of the system cables (MDR cable, DVI cable) are usually detected, if no connection, such as cable disconnection, is detected, a warning indication (alternate flashing of the red and blue areas) is displayed on the mask screen, and the red and green LEDs flash alternately. Then after about 30 seconds, the power is automatically turned off.



Alternate flashing at intervals of about 1 second

To operate the panel without the Media Receiver, there are the following two ways:

1. Operation-without-the-Media-Receiver mode

Input the "SYS S00" RS232C command. The status of the LEDs changes to that in normal operation mode.

Note: Turning the AC switch to OFF then ON also maintains this mode. However, once the unit is connected with the Media Receiver using the System cable, this mode is automatically canceled.

2. DVI mode

Turn the unit on while DVI SG signals are being input with only the DVI connecter connected. After a warning is displayed for about 5 seconds, the unit is ready to display the screen of the input signal. (Blue LED lit)

Notes: • Although the output from XGA (43 inch) and WXGA (50 inch) can be input to the unit, this is not a mode open to general users. (With some signals, errors such as power-down may occur.)

7.1.5 POWER ON/OFF FUNCTION FOR THE LARGE-SIGNAL SYSTEM

Function: To prevent a power-down from being generated, operation of only the digital-signal processing and audio circuits are enabled, and power is not supplied to the panel driving system (large-signal system).

Usages: 1. In a case where a check is required of signals' being correctly output to the driving systems during a repair, etc.
2. In a case where diagnosis is required for judging whether the power to the large-signal system or small-signal system has been down when a power-down occurred

Methods: 1. Short-circuit the points (see Fig. 4 below) on the face and on the reverse side of the HD DIGITAL Assy.
2. Issue the "DRV S00" RS-232C command. (Command for turning the function off: DRV S01)

Notes:
- When the power to the large-signal system is off, as the PD signal is muted, power-downs other than PS_PD are not activated.
- As soon as the clips are removed while the power to the large-signal system is off, a power-down will occur. Be sure to turn the power off before removing the clips.
- While this function is activated with RS-232C commands, it is possible to issue "DRV S01" (for turning the function off) while the power is on. However, as it may damage the unit, turn the power off before issuing the "DRV S01" command.
- Although the "DRV S00/S01" RS-232C commands are valid during Standby mode, once the main power is turned off, the unit will return to "DRV S01."

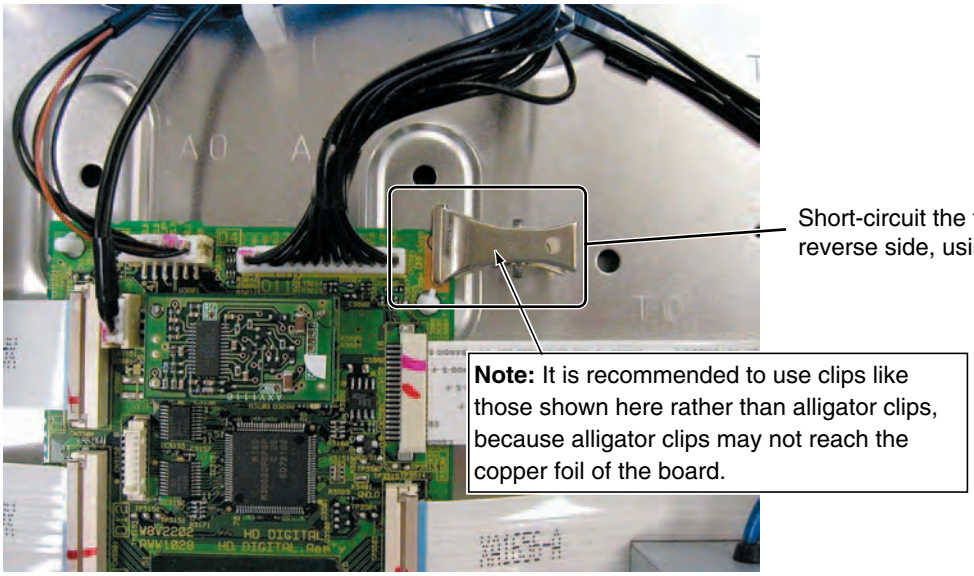


Fig. 4 Position of DRIVE OFF

7.1.6 BACKUP WHEN THE MAIN UNIT IS ADJUSTED

■ Outline

Adjustment data set at the factory are stored in the EEPROM (IC****/4K) on the HD DIGITAL Assy. Those adjustment data are automatically backed up in the EEPROM (backup EEPROM: IC****) on the HD AUDIO Assy. Therefore, even if the HD DIGITAL Assy is replaced, the adjustment data can be restored by copying the backup data, which enables you to omit newly performing adjustments on the main unit.

■ Data to be backed up

- Voltage margin adjustment values
- Data on the hour meter
- Upper limit of power-adjustment value
- Data on the pulse meter
- Panel WB adjustment values
- Serial number
- Drive waveform adjustment values
- Data of the P-ON counter
- PD/SD histories

■ How to copy the backup data

1. When the HD DIGITAL Assy is replaced with that for service (normal servicing)
   (In a case where no data are on the DIG. EEP, and backup data have been adjusted)

   Command: "BCP" (Effective during FAY)
   Factory Menu

   PANEL INFORMATION
   ▼ (down)
   • • •
   ▼ (down)
   ETC. (+)
   [set]
   BACKUP DATA: NO OPRT
   >> (right)
   BACKUP DATA: TRANSFER
   [set] (Press and hold for 5 seconds.)

   - After the HD DIGITAL Assy is replaced with that for service, check that “DIG. EEP: NO DATA!” is displayed on the Panel Information screen of the Factory Menu.
   - If this command is not executed, the red LED lights, and the blue LED flashes, to warn you that copying of the backup adjustment data for the main unit failed.
   - If both the HD DIGITAL Assy and HD AUDIO Assy are to be replaced, first replace the HD AUDIO Assy and set the unit to Standby mode. Then replace the HD DIGITAL Assy.

2. In a case where a HD DIGITAL Assy that was mounted on another unit is to be reused as a service part.

   Command: "FAJ" (Effective during FAY)
   Factory Menu: PANEL FACT => ETC => DIGITAL EEPROM: DELETE

   PANEL INFORMATION
   ▼ (down)
   • • •
   ▼ (down)
   ETC. (+)
   [set]
   BACKUP DATA: NO OPRT
   ▼ (down)
   DIGITAL EEPROM: NO OPRT
   >> (right)
   DIGITAL EEPROM: REPAIR
   [set] (Press and hold for 5 seconds.)

   - If the HD DIGITAL Assy of Unit 1 is mounted to be reused in Unit 2 to be repaired, and Unit 2 enters Standby mode, the adjustment data and histories stored in Unit 1 are erased, and those of Unit 2 are copied. Once overwritten, the original data will not be restored. After the Assy is replaced, be sure to enter Factory mode, using the remote control unit for servicing, and perform the procedures described herein. Or, before mounting an Assy to be reused as a service Assy, perform these procedures then mount it on the product to be repaired.

3. In a case where the HD DIGITAL Assy is replaced with one for servicing because of a defective EEPROM on the original Assy and manual adjustments are to be performed
   (In a case where no data are stored in the HD DIGITAL Assy or as backup, and the values that have been manually adjusted on Service Menu are to be applied as adjustment data for the main unit)

Command: "UAJ" (Effective during FAY)
Factory Menu

PANEL INFORMATION
▼ (down)
• • •
▼ (down)
ETC. (+)
[set]
BACKUP DATA: NO OPRT
▼ (down)
DIGITAL EEPROM: NO OPRT
>> (right)
DIGITAL EEPROM: REPAIR
[set] (Press and hold for 5 seconds.)

- If the HD DIGITAL Assy with which adjustment data for the main unit have been copied is mounted, the above procedures are not necessary after manual adjustment.
  (The indication "DIGITAL EEPROM: REPAIR" will not be displayed.)

7.1.7 HOW TO CLEAR HISTORY DATA

■ Clearing data on various histories when the HD DIGITAL Assy is replaced

Other than adjustment data for the main unit, data to be backed up include the accumulated power-on time and a history of defective parts, which are data updated and stored in memory. Among those data, some are required to be cleared when the HD DIGITAL Assy is replaced for servicing, as shown below:

Item	Backed-up data	Type of servicing			RS-232C command
		Panel replacement	Replacement of the power-supply block	Others	
Hour meter	Accumulated display	To be cleared	Not to be cleared	Not to be cleared	CHM
SD history	Point where an SD occurred and data on the hour meter	To be cleared	Not to be cleared	Not to be cleared	CSD
PD history	Point where a PD occurred and data on the hour meter	To be cleared	Not to be cleared	Not to be cleared	CPD
Pulse meter	Accumulated number of pulses of the Panel (5 blocks)	To be cleared (essential)	Not to be cleared	Not to be cleared	CPM
Accumulated number of power-ons	Accumulated number of RELAY_ONs	Not to be cleared	To be cleared (essential)	Not to be cleared	CPC

Notes:

1: With the PDP-506P/436P and subsequent models, because various compensation functions use pulse-meter data for calculating compensation values, if related Assys are replaced, data on various histories must be cleared.

2: To clear data using RS-232C commands, after entering Factory mode (by sending FAY or PFY), issue a corresponding command. Otherwise, the command will not be executed.

How to clear the history for each item on the Factory Menu

Start point of Panel Factory

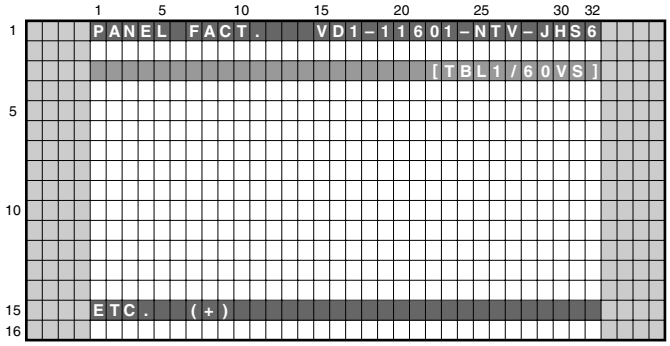
PANEL INFORMATION

▼ (down)

• • •

▼ (down)

ETC. (+)



[set]

BACKUP DATA

▼ (down)

DIGITAL EEPROM

▼ (down)

Clearing the PD history

PD INFO: NO OPRT >> (right) PD INFO: CLEAR

[set] (Press and hold for 5 seconds.)

▼ (down)

Clearing the SD history

SD INFO: NO OPRT >> (right) SD INFO: CLEAR

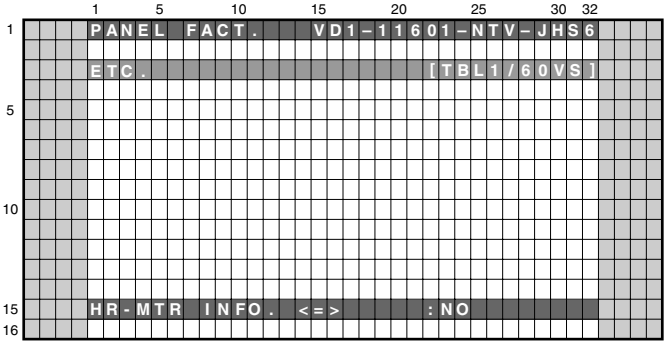
[set] (Press and hold for 5 seconds.)

▼ (down)

Clearing the data on the hour meter

HR-MTR INFO: NO OPRT >> (right) HR-MTR INFO: CLEAR

[set] (Press and hold for 5 seconds.)



▼ (down)

Clearing the data on the pulse meter

PM/B1-BS INFO: NO OPRT >> (right) PM/B1-BS INFO: CLEAR

[set] (Press and hold for 5 seconds.)

▼ (down)

Clearing the data on the number of power-ons

P COUNT INFO: NO OPRT >> (right) P COUNT INFO: CLEAR

[set] (Press and hold for 5 seconds.)

7.1.8 DISASSEMBLY

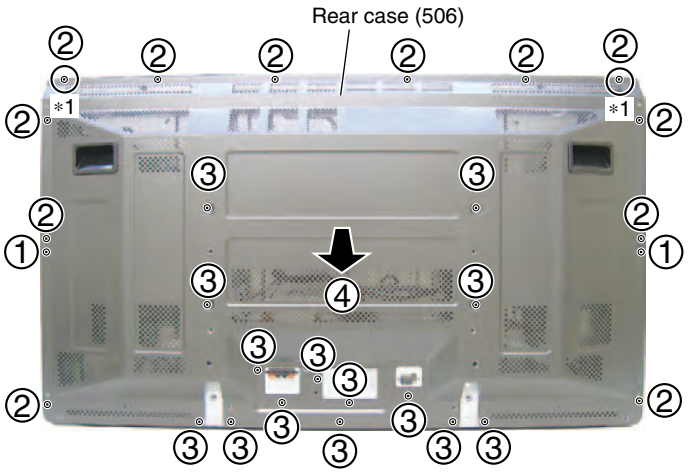
Note : Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.

1 Rear Case (506)

① Remove the two screws.
② Remove the tweleve screws.
③ Remove the fourteen screws.

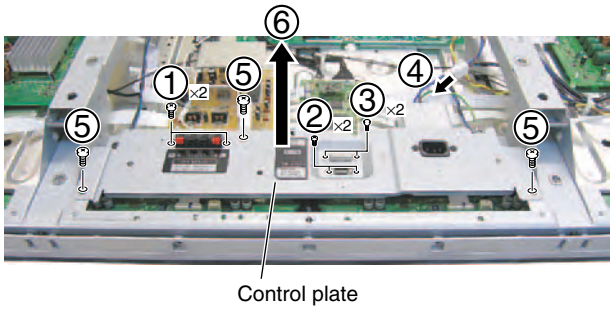
Note ∗1:
When reassembling, first secure the screws for these holes to position the rear case (506) correctly.
The hole of a left side, the screw tighten the hole of the right side next first.

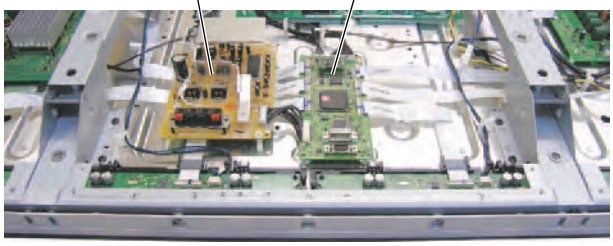
④ Remove the rear case (506).



2 Control Plate Section

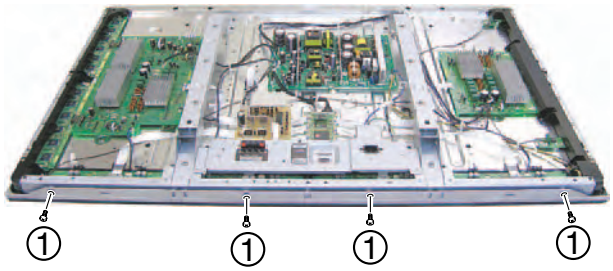
① Remove the two screws.
② Remove the two screws.
③ Remove the two hexagon head screws.
④ Disconnect the connector.
⑤ Remove the three screws.
⑥ Remove the control plate.



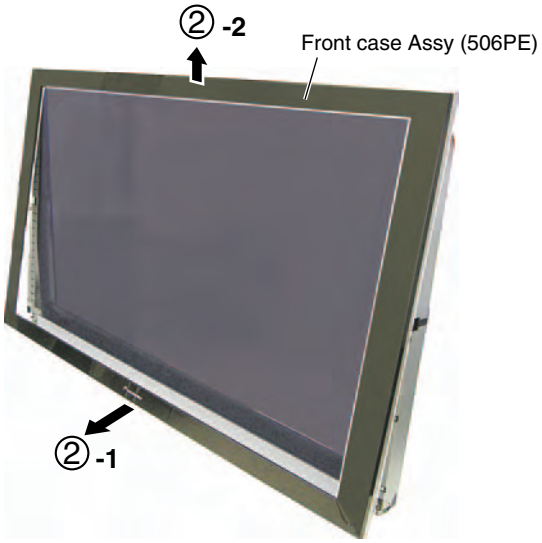


3 Front Case Assy (506PE)

① Remove the four screw rivets.

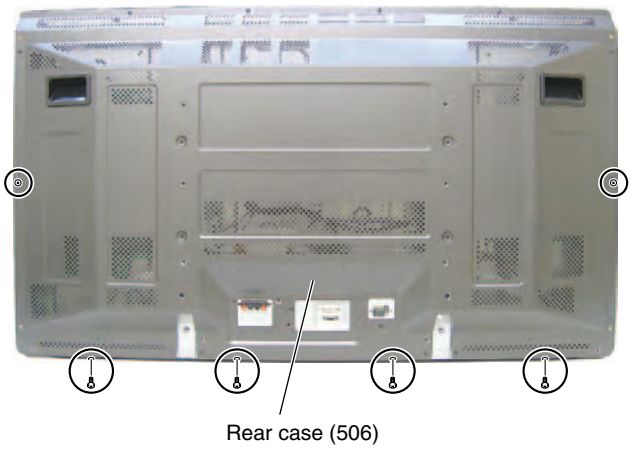


② Remove the front case Assy (506PE).



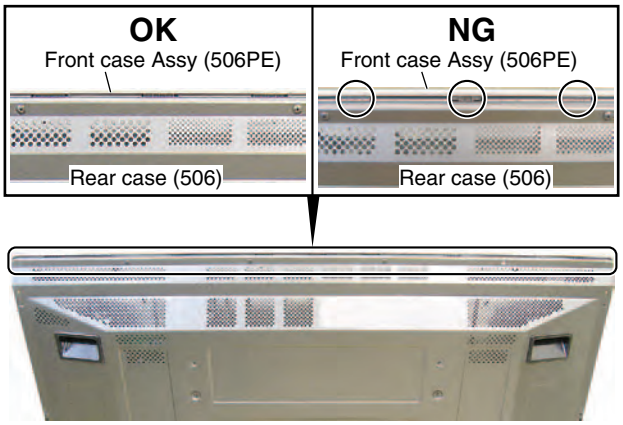
• When only the front case assy (506PE) is to be removed

The front case assy (506PE) can be removed without removing the rear case (506) beforehand.
Remove the two screws and four screw rivets shown below:



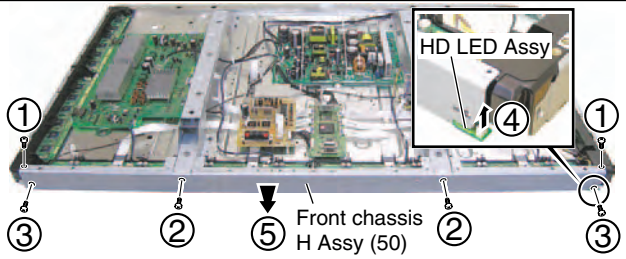
• Note when the front case assy (506PE) is to be reattached

① Hook the upper part of the Front Case Assy (506PE) on the upper part of the Front Panel, leaving a fist-sized gap between the bottom and the lower part of the Front Case Assy.
② Push the couplers of the Front Case Assy (506PE) into the rear case (506).
③ Make sure that all the couplers have been pushed into the rear case (506).



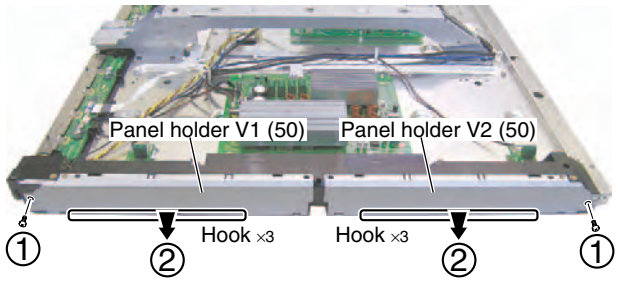
4 Front Chassis H Assy (50)

① Remove the two screws.
② Remove the two screws.
③ Remove the two screws.
④ Disconnect the connector.
⑤ Remove the front chassis H Assy (50).

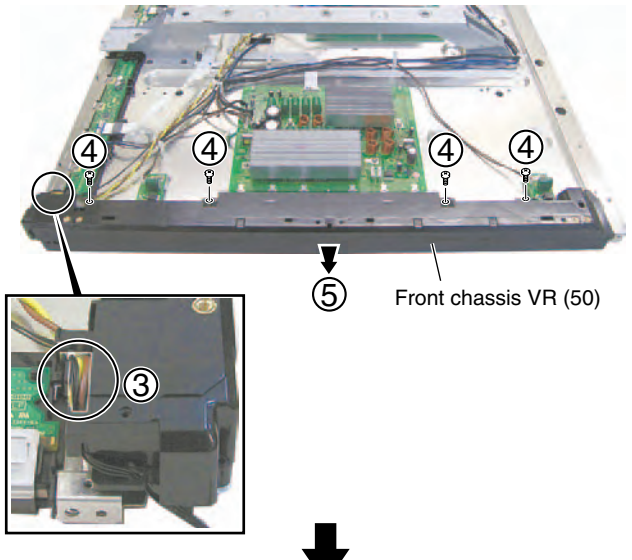


5 SUS CLAMP 1 and 2 Assys

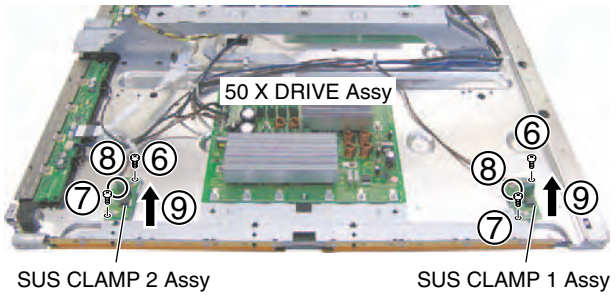
① Remove the two screws.
② Remove the panel holder V1 (50) and V2 (50)s.
(Unhook the six hooks.)



③ Release the housing wire.
④ Remove the four screws.
⑤ Remove the front chassis VR (50).



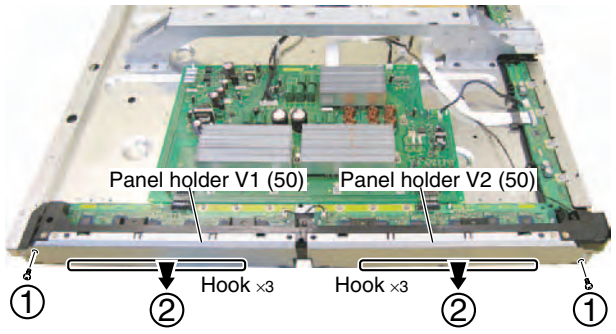
⑥ Remove the two screws.
⑦ Remove the two screws.
⑧ Unhook the two PCB spacers.
⑨ Remove the SUS CLAMP 1 and 2 Assys.



6 50 SCAN A and B Assys

① Remove the two screws.

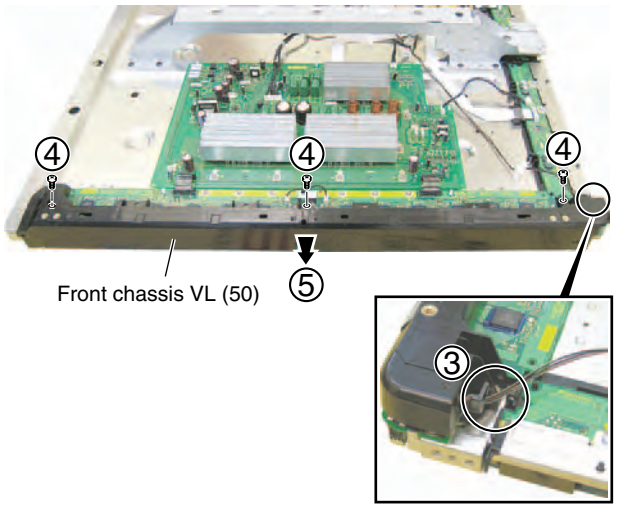
② Remove the panel holder V1 (50) and V2 (50)s.
(Unhook the six hooks.)



③ Release the housing wire.

④ Remove the three screws.

⑤ Remove the front chassis VL (50).

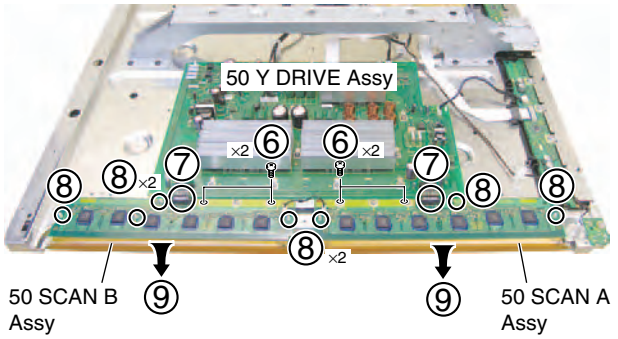


⑥ Remove the four screws.

⑦ Disconnect the two pin connectors.

⑧ Unhook the seven PCB spacers.

⑨ Remove the 50 SCAN A and B Assys.



7.2 IC

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

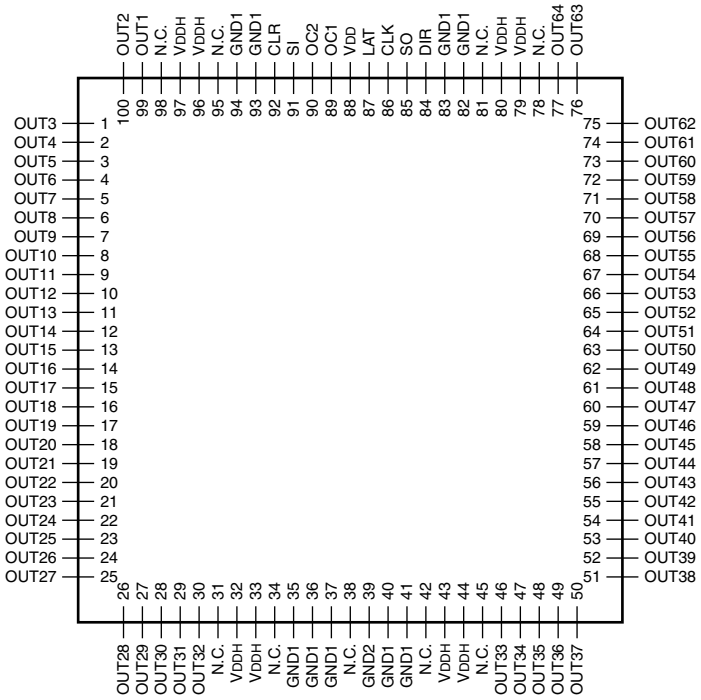
● **List of IC**

AN16025A, TC7SH08FUS1, TC74VHC00FTS1, AXF1140, AXF1142, TC74VHC08FTS1, AXF1141, M62334FP, TC74VHC123AFTS1, PST3610UR, PEG122C, NJW1183L

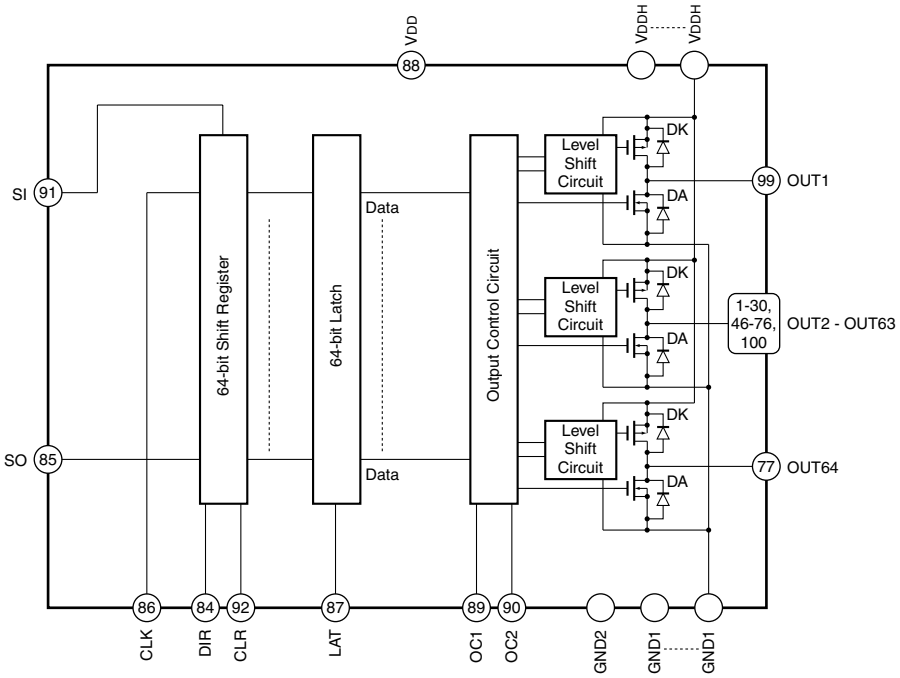
■ AN16025A (50 SCAN A ASSY : IC2701 - IC2706) (50 SCAN B ASSY : IC2801 - IC2806)

• Plasma Display Panel IC

● **Pin Arrangement (Top view)**



● **Block Diagram**



● Pin Function

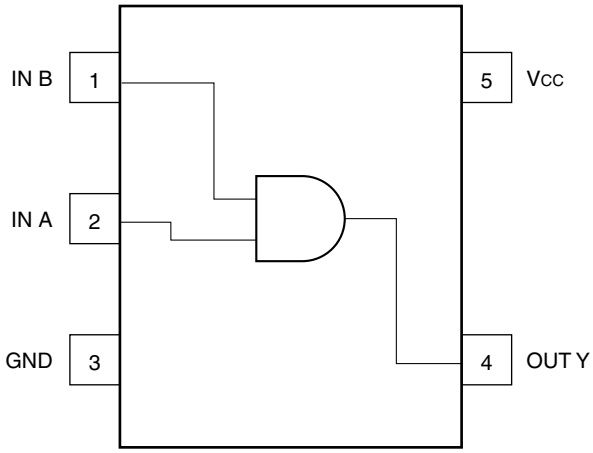
No.	Pin Name	I/O	Pin Function
1 - 30	OUT3 - OUT32	O	High-voltage push-pull output
31	N.C.	–	Not connected
32 - 33	V_{DDH}	–	High-voltage circuit supply
34	N.C.	–	Not connected
35 - 37	GND1	–	Ground
38	N.C.	–	Not connected
39	GND2	–	Ground
40 - 41	GND1	–	Ground
42	N.C.	–	Not connected
43 - 44	V_{DDH}	–	High-voltage circuit supply
45	N.C.	–	Not connected
46 - 77	OUT33 - OUT64	O	High-voltage push-pull output
78	N.C.	–	Not connected
79 - 80	V_{DDH}	–	High-voltage circuit supply
81	N.C.	–	Not connected
82 - 83	GND1	–	Ground
84	DIR	I	Setup of shift register shift direction L = Shift into reverse (SO → SI) H = Shift forward (SI → SO)
85	SO	I/O	Serial data input / output
86	CLK	I	Serial clock input Fetch SI or SO data to shift register by CLK rise edge
87	LAT	I	LAT data input L = Transfer shift register data to output latch H = Hold data to output latch
88	V_{DD}	–	Logic supply
89	OC1	I	Output control Control output according to the right truth value table
90	OC2	I	
91	SI	I/O	Serial data input / output
92	CLR	I	All output reset CLR pin : L → Normal operation CLR pin : H → All output High
93 - 94	GND1	–	Ground
95	N.C.	–	Not connected
96 - 97	V_{DDH}	–	High-voltage circuit supply
98	N.C.	–	Not connected
99 - 100	OUT1 - OUT2	O	High-voltage push-pull output

OC1	OC2	OUT
L	L	ALL Hi-Z
L	H	DATA
H	L	ALL L
H	H	ALL H

■ TC7SH08FUS1 (50 SCAN B ASSY : IC2807)

• 2-input AND Gate

● Pin Arrangement (Top view) / Block Diagram



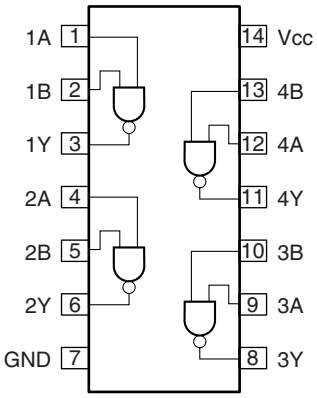
● Truth Table

A	B	Y
L	L	L
L	H	L
H	L	L
H	H	H

■ TC74VHC00FTS1 (50 X DRIVE ASSY : IC1002)

• Quad 2-Input NAND Gate

● Block Diagram



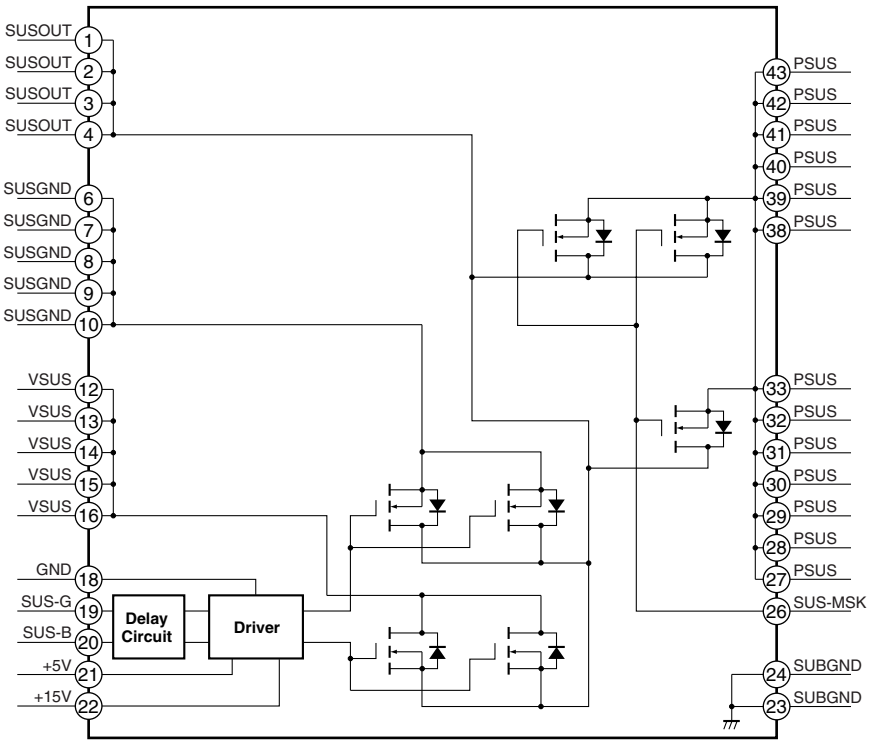
● Truth Table

A	B	Y
L	L	H
L	H	H
H	L	H
H	H	L

■ AXF1140 (50 X DRIVE ASSY : IC1202)

• X Mask Module

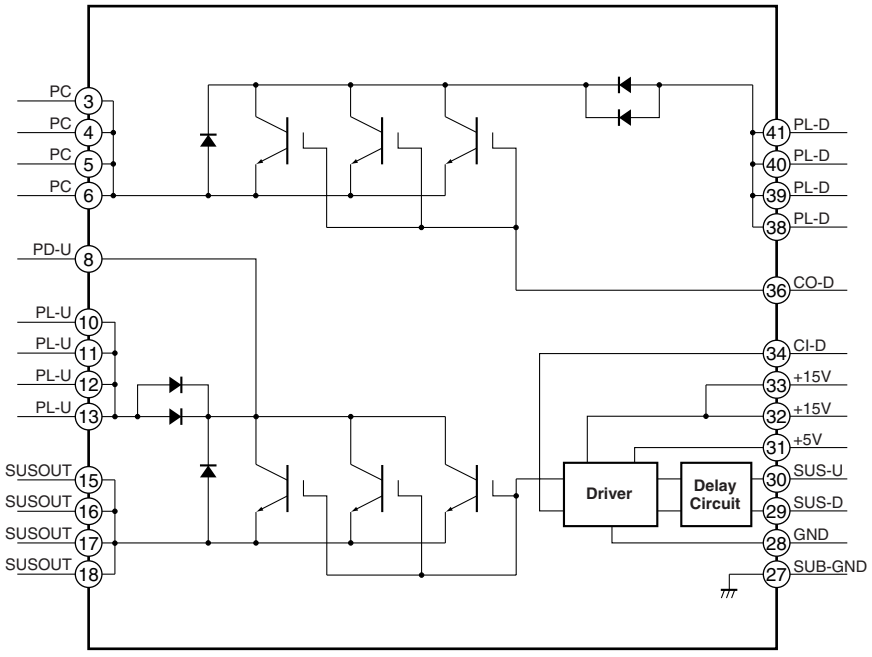
● Block Diagram



■ AXF1142 (50 X DRIVE ASSY : IC1101)
(50 Y DRIVE ASSY : IC2101)

• DK Module

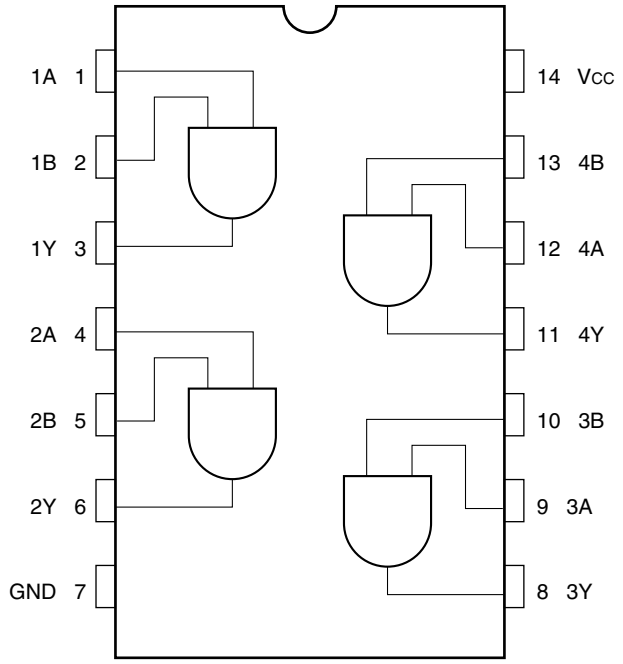
● Block Diagram



■ TC74VHC08FTS1 (50 Y DRIVE ASSY : IC2003, IC2005)

• Quad 2-input AND Gate

● Pin Arrangement (Top view) / Block Diagram



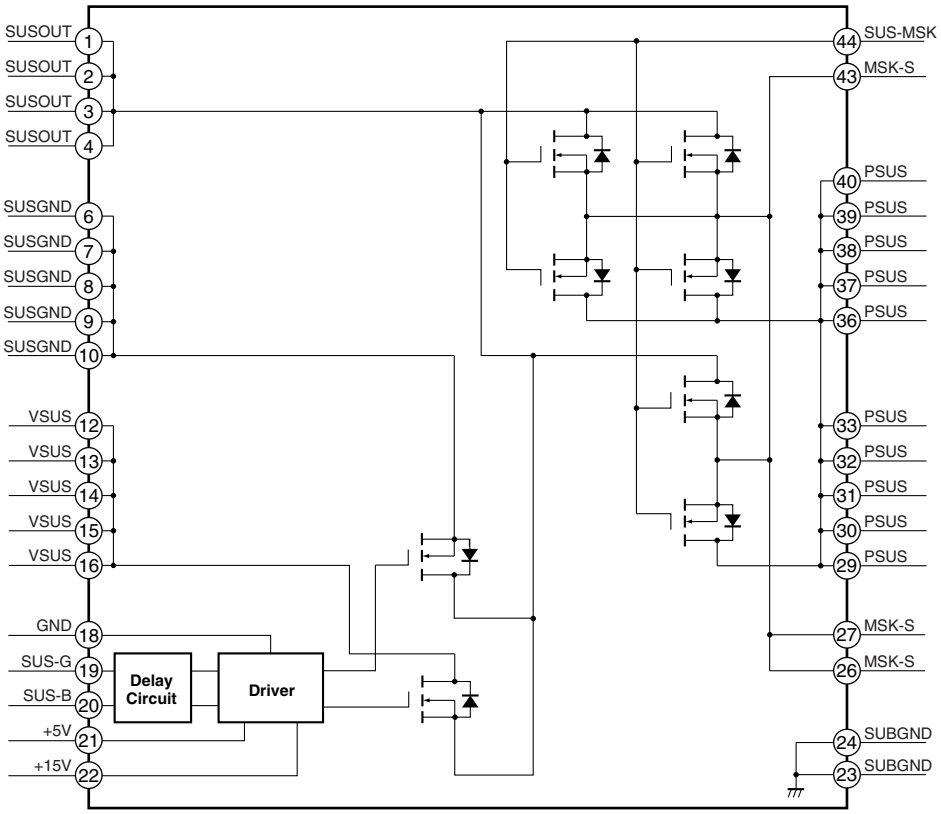
● Truth Table

A	B	Y
L	L	L
L	H	L
H	L	L
H	H	H

■ AXF1141 (50 Y DRIVE ASSY : IC2252, IC2253)

• Y Mask Module

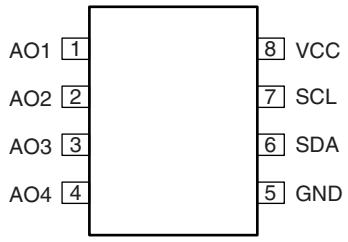
● Block Diagram



■ M62334FP (HD DIGITAL ASSY : IC3157)

• 8-bit 4ch I2C Bus D-A Converter with Buffer Amplifier

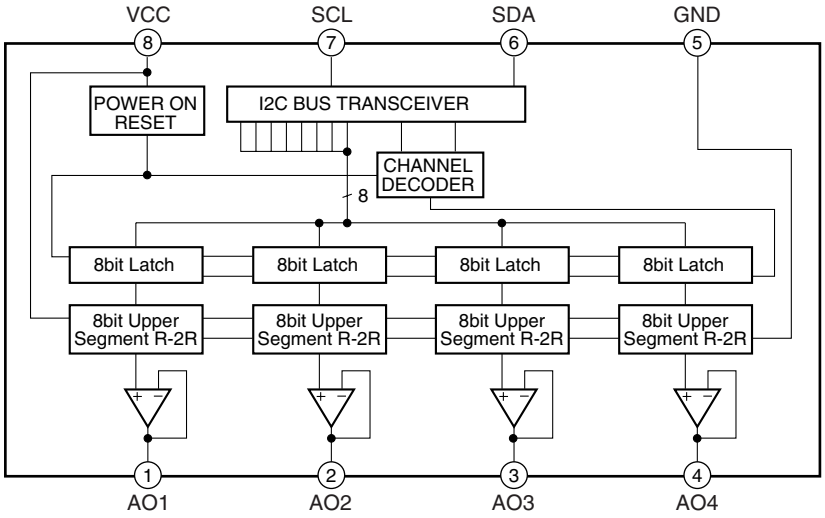
● Pin Arrangement (Top view)



● Pin Function

No.	Pin Name	Pin Function
1	AO1	8-bit resolution D-A converter output
2	AO2	
3	AO3	
4	AO4	
5	GND	Ground
6	SDA	Serial data input
7	SCL	Serial clock input
8	VCC	Power supply

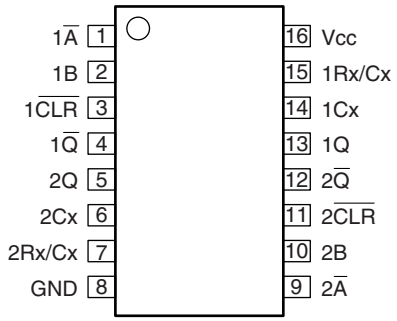
● Block Diagram



■ TC74VHC123AFTS1 (HD DIGITAL ASSY : IC3160)

• Dual Monostable Multivibrator/AFN/AFT Retriggerble

● Pin Arrangement (Top view)



● Truth Table

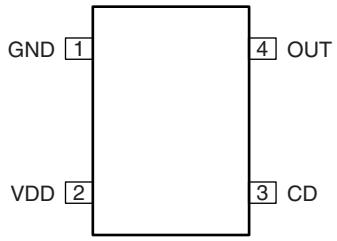
Inputs			Outputs		Note
$\overline{A}$	B	$\overline{CLR}$	Q	$\overline{Q}$	
↓	H	H	⎍	⎍	Output enable
X	L	H	L	H	Inhibit
H	X	H	L	H	Inhibit
L	↑	H	⎍	⎍	Output enable
L	H	↑	⎍	⎍	Output enable
X	X	L	L	H	Reset

X: Don't care

■ PST3610UR (HD DIGITAL ASSY : IC3304)

• Reset IC

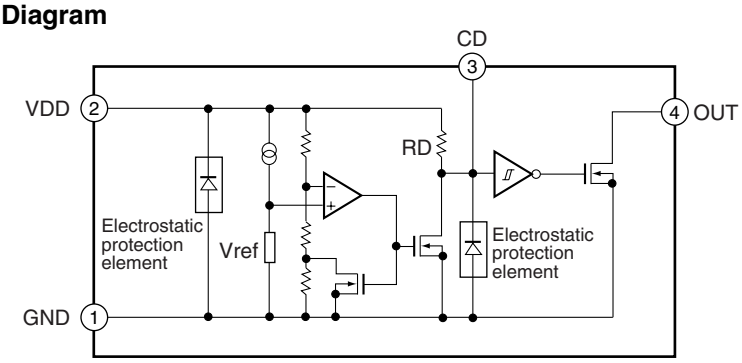
● Pin Arrangement (Top view)



● Pin Function

No.	Pin Name	Pin Function
1	GND	Ground
2	VDD	Power supply / Voltage detection
3	CD	Capacitor connect pin for delay
4	OUT	Reset signal output

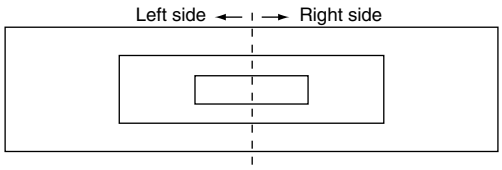
● Block Diagram



■ PEG122C (HD DIGITAL ASSY : IC3401)

• LSI for PDP video processing (SEQUENCE PROCESSOR)

● Pin Arrangement (Top view)



● Left side (Top view)

	1	2	3	4	5	6	7	8	9	10	11	12	13	
A	BAI5	GAI1	GAI4	GAI9	RAI4	RAI9	BBI0	BBI6	GBI1	GBI5	RBI1	RBI7	TRNSEND1	A
B	BAI4	GAI0	GND33	GAI8	RAI3	RAI8	HDI	BBI5	GBI0	GDN33	RBI0	RBI6	TRNSEND0	B
C	BAI3	BAI9	VDD33	GAI7	RAI2	RAI7	VDI	BBI4	BBI9	VDD33	GBI9	RBI5	VDD33	C
D	BAI2	BAI8	GAI3	GAI6	RAI1	RAI6	DEI	BBI3	BBI8	GBI4	GBI8	RBI4	RBI9	D
E	BAI1	BAI7	GAI2	GAI5	RAI0	RAI5	DCLKI	BBI2	BBI7	GBI3	GBI7	RBI3	RBI8	E
F	BAI0	BAI6	PEAK	APLDT	THEATER	GND12	VDD12	BBI1	VDD12	GBI2	GBI6	RBI2	VDD12	F
G	XSCAN20	XSCAN19	XSCAN18	XSCAN17	XSCAN16	VDD12								G
H	XSCAN15	XSCAN14	XSCAN13	XSCAN12	XSCAN11	VDDTC12								H
J	XSCAN10	GND33	VDD33	XSCAN9	GNDTC12	VDD12								J
K	XSCAN8	XSCAN7	XSCAN6	XSCAN5	XSCAN4	VDDTC12								K
L	XSCAN3	XSCAN2	XSCAN1	XSCAN0	GND12	VDD12					GND12	GND12	GND12	L
M	XSUS10	XSUS9	XSUS8	XSUS7	GNDTC12	VDD12					GND12	GND12	GND12	M
N	XSUS6	GND33	VDD33	XSUS5	GND12	VDD12					GND12	GND12	GND12	N
P	XSUS4	XSUS3	XSUS2	XSUS1	XSUS0	VDDTC12					GND12	GND12	GND12	P
R	ADRS0	ADRS1	ADRS2	ADRS3	GNDTC12	VDD12					GND12	GND12	GND12	R
T	TEST_I0	GND33	VDD33	TEST_I1	TEST_I2	TEST_R					GND12	GND12	GND12	T
U	TXOUTM063	TXOUTP063	GNDLA	VDDLA	GNDLA	VDDL12								U
V	TXCLKOUTM06	TXCLKOUTP06	GNDLA	VDDLA	GNDLA	VDDLA								V
W	TXOUTM062	TXOUTP062	GNDLA	VDDLA	GNDLA	VDDLA								W
Y	TXOUTM061	TXOUTP061	GNDLA	VDDLA	GNDLA	VDDL12								Y
AA	TXOUTM060	TXOUTP060	GNDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDL12	VDDLA	VDDLA	VDDL12	VDDLA	VDDLA	AA
AB	TXOUTM073	TXOUTP073	GNDLA	VDDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	VDDBG	REFIN	AB
AC	TXCLKOUTM07	TXCLKOUTP07	GNDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	AC
AD	TXOUTM072	TXOUTP072	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	AD
AE	TXOUTM071	TXOUTP071	GNDLA	TXOUTP033	TXCLKOUTP03	TXOUTP032	TXOUTP031	TXOUTP030	TXOUTP023	TXCLKOUTP02	TXOUTP022	TXOUTP021	TXOUTP020	AE
AF	TXOUTM070	TXOUTP070	GNDLA	TXOUTM033	TXCLKOUTM03	TXOUTM032	TXOUTM031	TXOUTM030	TXOUTM023	TXCLKOUTM02	TXOUTM022	TXOUTM021	TXOUTM020	AF

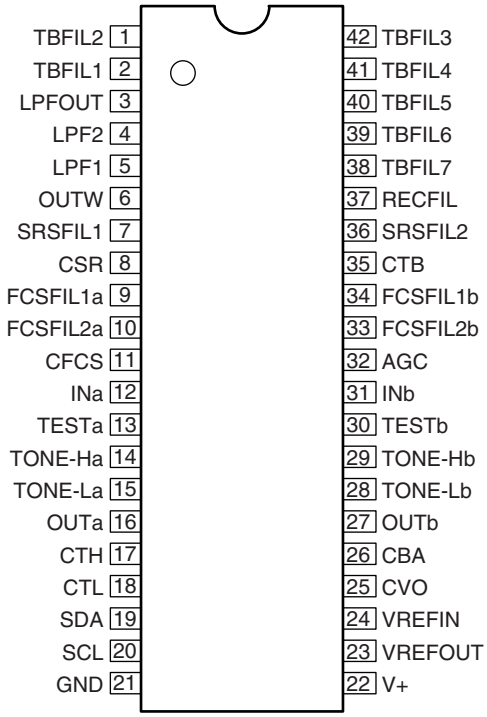
● Right side (Top view)

	14	15	16	17	18	19	20	21	22	23	24	25	26	
A	CLKD	VSSPA	EXDI011	EXDI09	EXA4	EXA10	EXA2	EXA16	EXA20	CSCS_N1	CSCS_N2	CSIOSCK1	CSIORXD	A
B	CSRD_N	VCCPA	EXDI04	GND33	EXA3	EXA9	EXA1	EXA15	EXA19	CSCS_N0	GND33	TCRAM_MONITOR0	TCRAM_MONITOR1	B
C	CLKS	CLK_MONI	EXDI012	VDD33	EXDI00	EXA8	CSWR_N	EXA14	EXA18	UARTRXD	VDD33	TCRAM_MONITOR2	CSIORQ	C
D	VSSPB	EXDI014	EXDI05	EXDI02	EXDI08	EXA7	EXA0	EXA13	EXA17	UARTTXD	CS10TXD	RESETX	SDIJTAG	D
E	VCCPB	EXDI07	EXDI013	EXDI010	EXDI01	EXA6	EXA11	EXA12	CSEXWAIT_N	SDITRST_N	SDITCK	SDIDBI_N	SDITMS	E
F	LPFMONI	EXDI015	EXDI06	EXDI03	VDD12	EXA5	VDD12	GND12	SDITDO	SDITDI	GPI000	GPI001	GPI002	F
G								VDD12	GPI003	GPI004	GPI005	GPI006	GPI007	G
H								VDDTC12	YSCAN20	YSCAN19	YSCAN18	YSCAN17	YSCAN16	H
J								VDD12	GNDTC12	YSCAN15	VDD33	GND33	YSCAN14	J
K								VDDTC12	YSCAN13	YSCAN12	YSCAN11	YSCAN10	YSCAN9	K
L	GND12	GND12	GND12					VDD12	GND12	YSCAN8	YSCAN7	YSCAN6	YSCAN5	L
M	GND12	GND12	GND12					VDD12	GNDTC12	YSCAN4	YSCAN3	YSCAN2	YSCAN1	M
N	GND12	GND12	GND12					VDD12	GND12	YSCAN0	VDD33	GND33	VSUS10	N
P	GND12	GND12	GND12					VDDTC12	YSUS9	YSUS8	YSUS7	YSUS6	VSUS5	P
R	GND12	GND12	GND12					VDD12	GNDTC12	YSUS4	YSUS3	YSUS2	VSUS1	R
T	GND12	GND12	GND12					YSUS0	RSV1	RSV0	VDD33	GND33	AFE_PS_N	T
U								VDDL12	GNDLA	VDDLA	GNDLA	TXOUTP050	TXOUTM050	U
V								VDDLA	GNDLA	VDDLA	GNDLA	TXOUTP051	TXOUTM051	V
W								VDDLA	GNDLA	VDDLA	GNDLA	TXOUTP052	TXOUTM052	W
Y								VDDL12	GNDLA	VDDLA	GNDLA	TXCLKOUTP05	TXCLKOUTM05	Y
AA	VDDLA	VDDLA	VDDL12	VDDLA	VDDLA	VDDL12	VDDLA	VDDLA	VDDLA	VDDLA	GNDLA	TXOUTP053	TXOUTM053	AA
AB	VREF12	GNDBG	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	VDDLA	GNDLA	TXOUTP040	TXOUTM040	AB
AC	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	VDDLA	GNDLA	TXOUTP041	TXOUTM041	AC
AD	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	GNDLA	TXOUTP042	TXOUTM042	AD
AE	TXOUTP013	TXCLKOUTP01	TXOUTP012	TXOUTP011	TXOUTP010	TXOUTP003	TXCLKOUTP00	TXOUTP002	TXOUTP001	TXOUTP000	GNDLA	TXCLKOUTP04	TXCLKOUTM04	AE
AF	TXOUTM013	TXCLKOUTM01	TXOUTM012	TXOUTM011	TXOUTM010	TXOUTM003	TXCLKOUTM00	TXOUTM002	TXOUTM001	TXOUTM000	GNDLA	TXOUTP043	TXOUTM043	AF

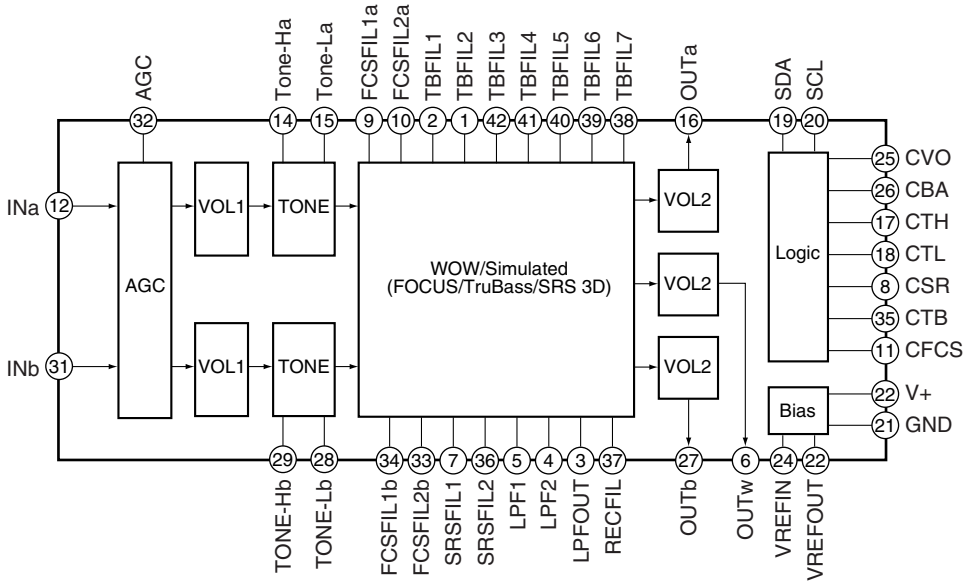
■ NJW1183L (HD AUDIO ASSY : IC3753)

• FOCUS & SRS IC

● Pin Arrangement (Top view)

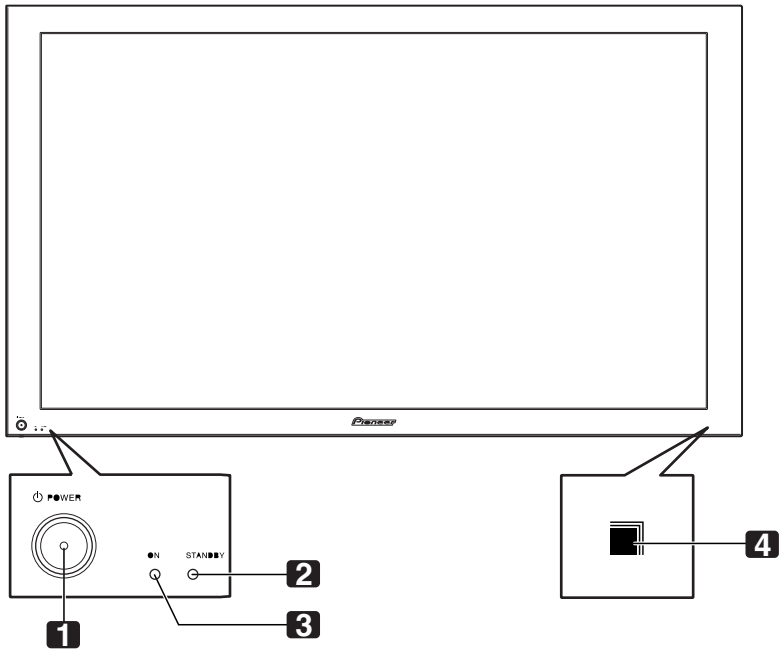


● Block Diagram



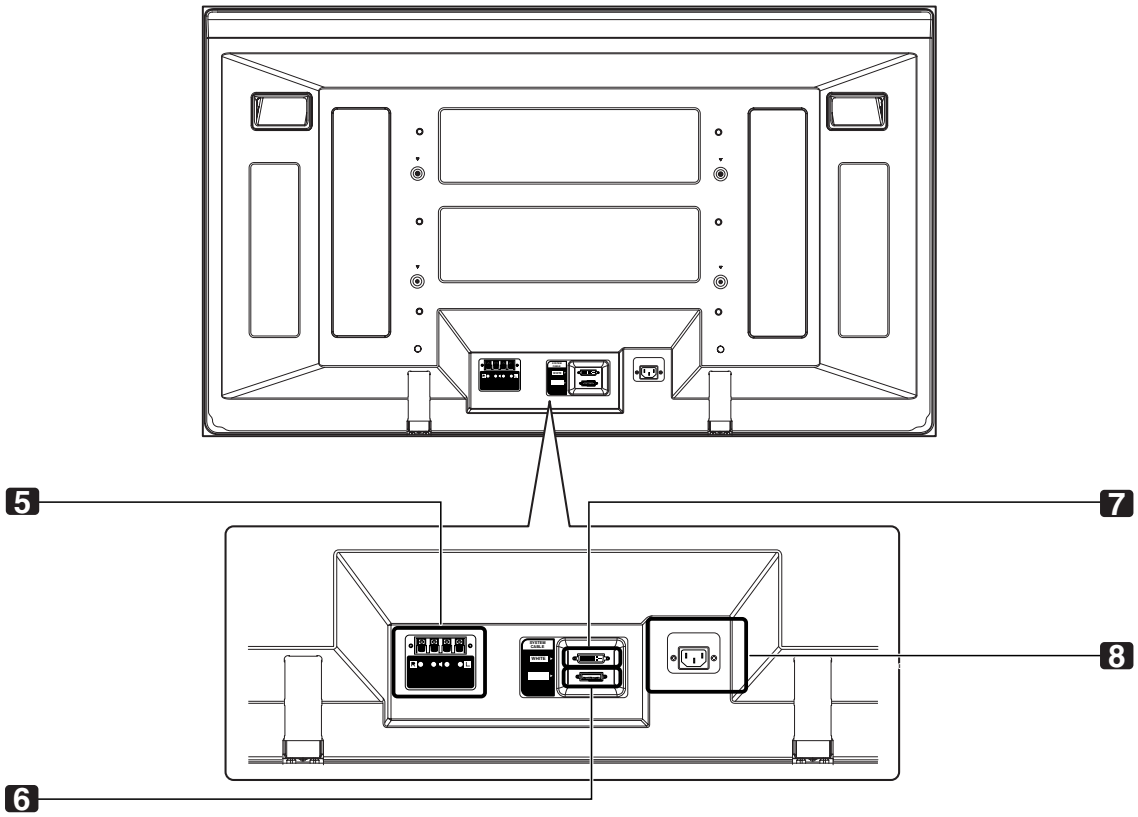
8. PANEL FACILITIES

Front view



1 **POWER** button
2 STANDBY indicator
3 POWER ON indicator
4 Remote control sensor

Rear view



5 SPEAKER (right/left) terminals
6 SYSTEM CABLE terminal (BLACK)
7 SYSTEM CABLE terminal (WHITE)
8 AC IN terminal

A

B

C

D

E

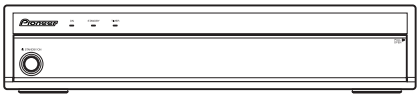
F

■ Jigs list

Jig No.	Jig Name	Remarks
GGF1475	Special Communication Device	See to "6.2 RS-232C COMMAND".

Pioneer sound.vision.soul

Service Manual



PDP-R06U

ORDER NO.
ARP3279

MEDIA RECEIVER

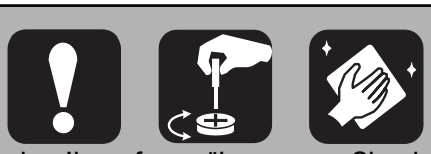
PDP-R06U
PRO-R06U

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
PDP-R06U	KUCXJ	AC 120V	
PRO-R06U	KUCXJ	AC 120V	

This service manual should be used together with the following manual(s).

Model No.	Order No.	Remarks
PDP-R06U, PRO-R06U	ARP3280	SCHEMATIC DIAGRAM, PCB CONNECTION DIAGRAM



For details, refer to "Important Check Points for good servicing".

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936

T-IZR SEPT. 2005 printed in Japan

SAFETY INFORMATION

This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 - Proposition 65

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

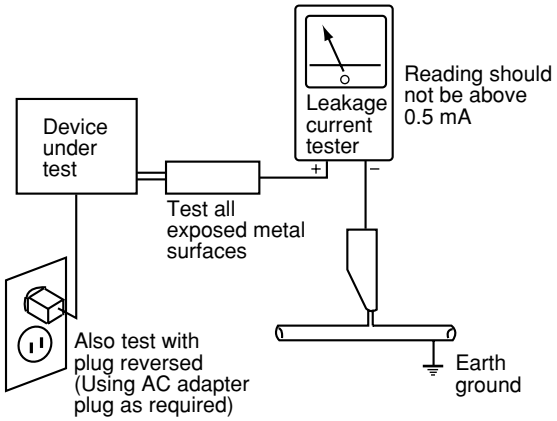
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol.
Please be sure to confirm and follow these procedures.

1. Product safety

Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification(addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris.
Soldering should be finished with the proper quantity. (Refer to the example)

④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs.
In addition, be sure that there are no pinched wires, etc.

⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages.
If you find a damaged power cord, please exchange it with a suitable one.

⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries.
Please pay attention to your surroundings and repair safely.

2. Adjustments

To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification.
Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts

Use grease and adhesives that are equal to the specified substance.
Make sure the proper amount is applied.

4. Cleaning

For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws

To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

CONTENTS

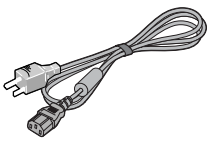
1. SPECIFICATIONS

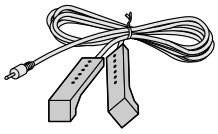
Item			Media Receiver, Model: PDP-R06U
Reception System (Digital)			ATSC Digital TV system
	Circuit type		8VSB/64QAM/256QAM/QPSK demodulation
	Tuner	VHF/UHF	VHF Ch. 2-13 UHF Ch. 14-69
		CATV	Ch. 2-135
	Audio format		Dolby Digital
Reception System (Analog)			American TV standard NTSC system
	Circuit type		Video signal detection PLL full synchronous detection, PLL digital synthesizer system
	Tuner	VHF/UHF	VHF Ch. 2-13 UHF Ch. 14-69
		CATV	ANT/CABLE A IN Ch. 1-135 ANT B IN Ch. 1-125
	Audio multiplex		BTSC system
Terminals	Rear	ANT/CABLE A IN	75 Ω UNBAL, F Type for DTV/VHF/UHF/CATV in
		ANT B IN	75 Ω UNBAL, F Type for VHF/UHF/CATV in Loop out
		i.LINK (TS)	S400 (2)
		INPUT 1	COMPONENT VIDEO in, S-VIDEO in, VIDEO in, AUDIO in, HDMI in*
		INPUT 2	S-VIDEO in, VIDEO in, AUDIO in
		INPUT 3	COMPONENT VIDEO in, AUDIO in, HDMI in ∗
		MONITOR OUT	VIDEO out, AUDIO out
		Digital Audio Output	Optical (1)
		G-LINK	1
		CONTROL IN	1
		CONTROL OUT	1
		SUB WOOFER OUTPUT	Variable
		Cable CARD	Point of Deployment
	Front	INPUT 4	COMPONENT VIDEO in, S-VIDEO in, VIDEO in, AUDIO in (Audio input is shared with PC INPUT.)
		PC	Analog RGB in, AUDIO in
On-screen display languages			English/French/Spanish
Power Requirement			120 V AC, 60 Hz, 35 W (26 W Standby)
Dimensions			420 (W) × 90 (H) × 299 (D) mm (16 9/16 (W) × 3 9/16 (H) × 11 13/16 (D) inches)
Weight			4.5 kg (9.9 lbs.)

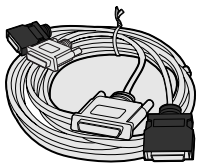
∗ **:** This conforms to HDMI1.1 and HDCP1.1.
HDMI (High Definition Multimedia Interface) is a digital interface that handles both video and audio using a single cable.
HDCP (High-bandwidth Digital Content Protection) is a technology used to protect copyrighted digital contents that use the Digital Visual Interface (DVI).

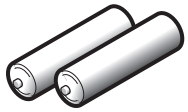
● Design and specifications are subject to change without notice.

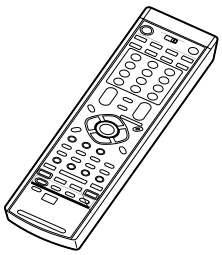
Accessories

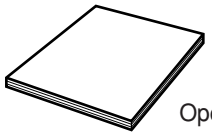

Power cord
(2 m/6.6 feet)
(ADG1215)


G-LINK cable
(3 m/9.8 feet)
(ADH1030)


System cable
(3 m/9.8 feet)
(ADF1027)


AA size Battery ×2
(Alkaline battery)

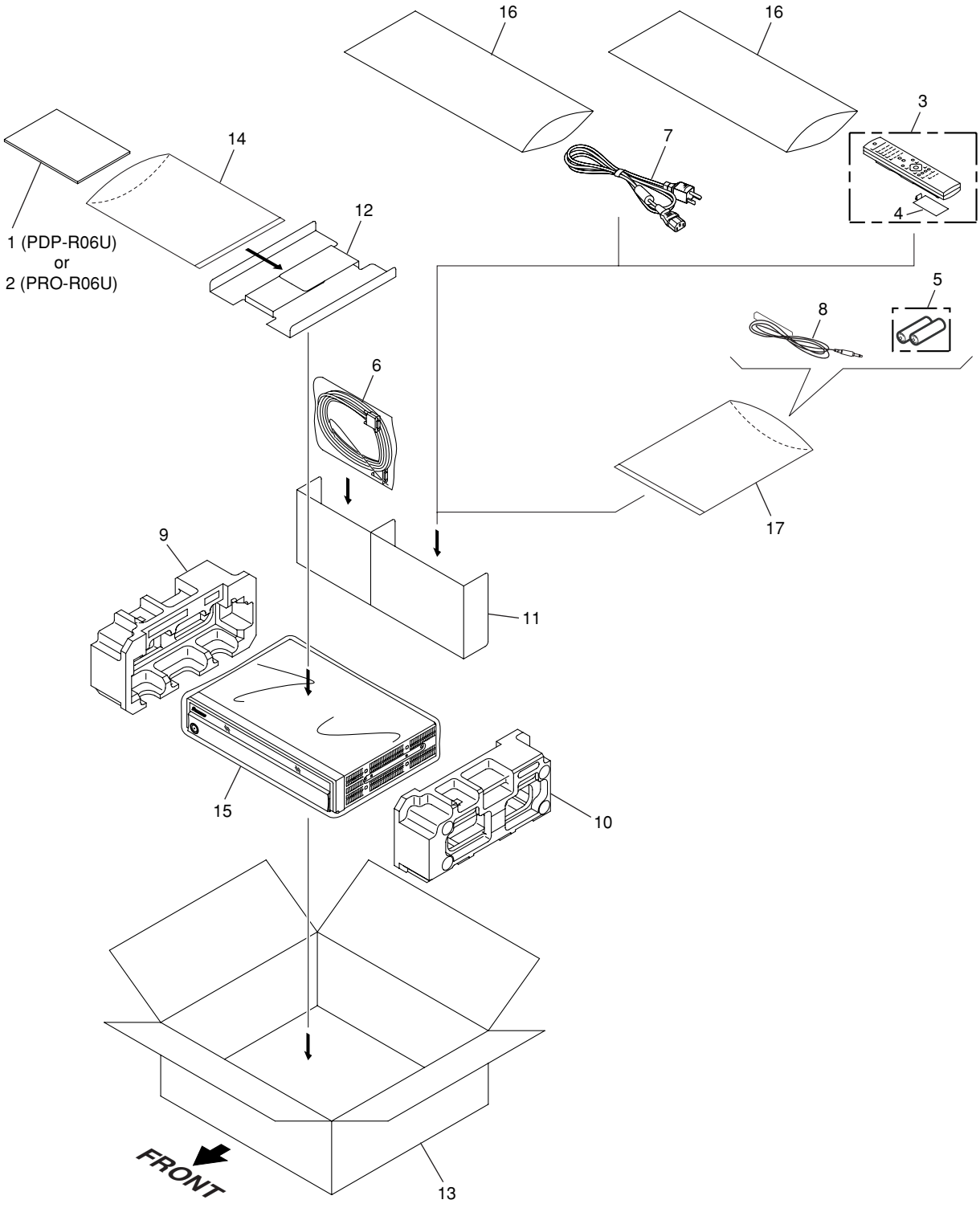

Remote control unit
(AXD1507: PDP-R06U)
(AXD1508: PRO-R06U)


Operating instructions

2. EXPLODED VIEWS AND PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

2.1 PACKING SECTION



(1) PACKING SECTION PARTS LIST

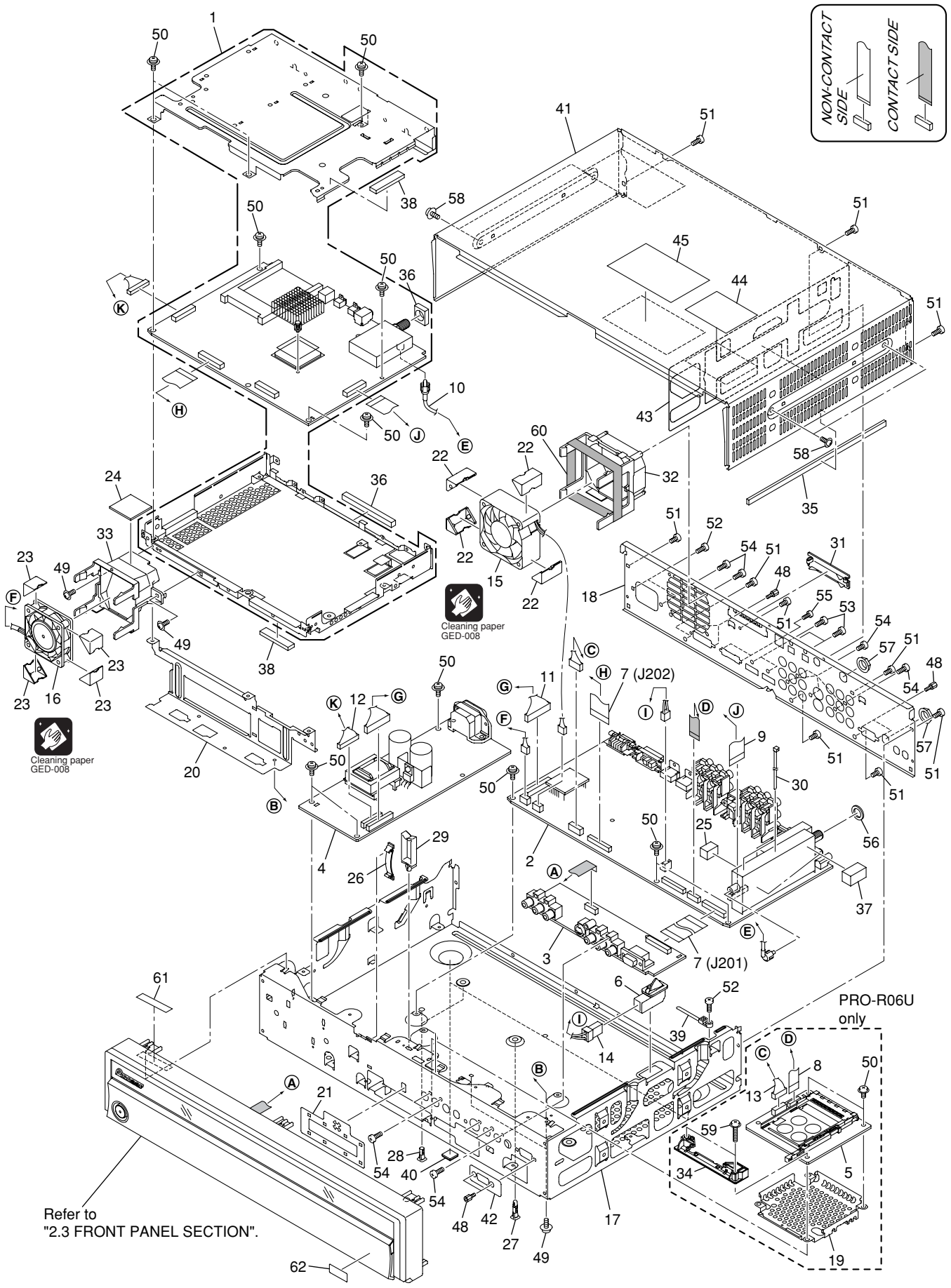
Mark	No.	Description	Part No.
	1	Operating Instructions (English, French, Spanish)	See Contrast table (2)
	2	Operating Instructions (English)	See Contrast table (2)
	3	Remote Control Unit	See Contrast table (2)
	4	Battery Cover	AZA7424
NSP	5	Dry Cell Battery (R6P, AA)	VEM1023
	6	System Cable (3m)	ADF1027
⚠	7	Power Cord	ADG1215
	8	G-LINK Cable (3m)	ADH1030
	9	Pad L	AHA2447
	10	Pad R	AHA2448
	11	Accessory Carton M	AHD3423
	12	Manual Case	AHD3428
	13	Carton	See Contrast table (2)
NSP	14	Catalogue Bag	AHG1340
	15	Laminate Sheet	AHG1350
	16	Air Cap Bag	AHG1351
NSP	17	Catalogue Bag	AHG1374

(2) CONTRAST TABLE

PDP-R06U/KUCXJ and PRO-R06U/KUCXJ are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-R06U/KUCXJ	PRO-R06U/KUCXJ
	1	Operating Instructions (English, French, Spanish)	ARE1399	Not used
	2	Operating Instructions (English)	Not used	ARB1567
	3	Remote Control Unit	AXD1507	AXD1508
	13	Carton U	AHD3448	Not used
	13	Carton UE	Not used	AHD3447

2.2 EXTERIOR SECTION



(1) EXTERIOR SECTION PARTS LIST

Mark	No.	Description	Part No.
⚠	1	MR DTB Assy	AWE1305
⚠	2	MR MAIN Assy	See Contrast table (2)
	3	FRONT Assy	See Contrast table (2)
⚠	4	POWER SUPPLY Unit	AXY1113
	5	PC CARD Module	See Contrast table (2)
	6	Power Switch (S1)	ASG1089
	7	Flexible Cable (J201)(J202)	ADD1311
	8	Flexible Cable (J206)	See Contrast table (2)
	9	Flexible Cable (J205)	ADD1317
	10	Antenna Cable (0.19m)	ADE1194
	11	16P Housing Wire (J101)	ADX3140
	12	12P Housing Wire (J102)	ADX3141
	13	6P Housing Wire (J103)	See Contrast table (2)
	14	3P Housing Wire (J106)	ADX3143
⚠	15	Fan Motor (60 x 25L)	AXM1047
⚠	16	Fan Motor (52 x 15L)	AXM1051
	17	Base Chassis	ANA1872
	18	Terminal Panel	See Contrast table (2)
⚠	19	PC Shield	See Contrast table (2)
	20	Frame B	ANG2781
⚠	21	Shield Plate	ANG2838
	22	Floating Rubber 60	AEB1410
	23	Floating Rubber 50	AEB1418
	24	Cushion Rubber	AEB1428
	25	Cushion Rubber	AEB1433
	26	Flat Clamp	AEC1858
	27	Circuit Board Spacer	AEC1969
	28	Circuit Board Spacer	AEC2028
	29	Re-used Wire Saddle	AEC2038
	30	Cable Tie	AEC2078
	31	Rear Cover	AMR3425
	32	Fan Holder 60	AMR3451
	33	Fan Holder 50	AMR3456
	34	PC Guide	See Contrast table (2)
⚠	35	Gasket S	ANK1784
	36	Gasket	ANK1788
	37	Gasket	ANK1791
	38	Gasket	ANK1793
	39	Jumper Band	BEC1228
	40	Rubber Foot	VEB1349
	41	Metal Bonnet	See Contrast table (2)
	42	Cover Sheet	See Contrast table (2)
	43	Side Cover Sheet	See Contrast table (2)
	44	Caution Label	See Contrast table (2)
	45	Caution Label	See Contrast table (2)

Mark	No.	Description	Part No.
	46	Label	See Contrast table (2)
	47	• • • • •	
	48	Hex Head Screw	BBA1051
	49	Screw	ABZ30P060FTC
	50	Screw	BBB30P080FTC
	51	Screw	BBZ30P060FTB
	52	Screw	BBZ30P100FTC
	53	Screw	BMZ30P060FTC
	54	Screw	BPZ30P080FTB
	55	Screw	PMZ26P060FTB
	56	Washer	ABE1080
	57	Nut	BBN1005
	58	Screw	See Contrast table (2)
	59	Screw	See Contrast table (2)
	60	TERAOKA No.570F 16mm(W)	GYH1001
	61	SW Caution	See Contrast table (2)
	62	TV Guide Label	AAX3210

(2) CONTRAST TABLE

PDP-R06U/KUCXJ and PRO-R06U/KUCXJ are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-R06U/KUCXJ	PRO-R06U/KUCXJ
⚠	2	MR MAIN Assy	AWV2225	AWV2223
	3	FRONT Assy	AWW1046	AWW1044
	5	PC CARD Module	Not used	AXY1073
	8	Flexible Cable (J206)	Not used	ADD1313
	13	6P Housing Wire (J103)	Not used	ADX3142
	18	Terminal Panel U	ANC2383	Not used
	18	Terminal Panel UE	Not used	ANC2376
⚠	19	PC Shield	Not used	ANG2578
	34	PC Guide	Not used	AMR3468
	41	Metal Bonnet	ANE1653	ANE1652
	42	Cover Sheet	Not used	AAK2850
	43	Side Cover Sheet	Not used	AAK2851
	44	Caution Label (U)	AAX3282	Not used
	44	Caution Label (UE)	Not used	AAX3279
	45	Caution Label	Not used	AAX3239
	46	Label	Not used	AAX3247
	58	Screw	ABZ30P060FTC	ABZ30P060FTB
	59	Screw	Not used	ABZ30P180FTC
	61	Power SW Caution U	AAX3249	Not used
	61	Power SW Caution UE	Not used	AAX3280

A

B

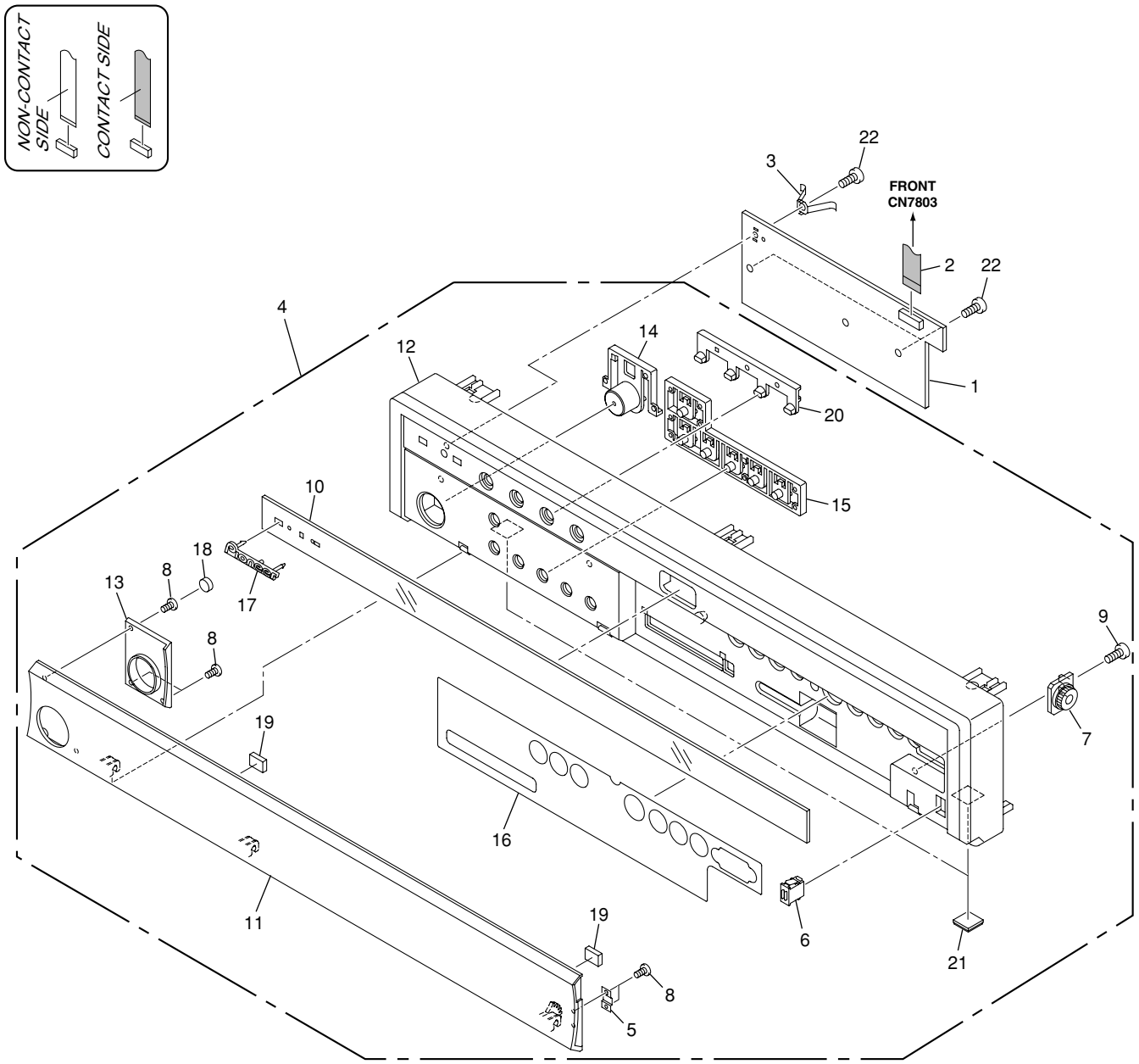
C

D

E

F

2.3 FRONT PANEL SECTION



(1) FRONT PANEL SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	LED Assy	AWW1045
	2	Flexible Cable (J207)	ADD1314
⚠	3	Earth Metal	BNG1336
	4	Front Panel Assy	See Contrast table (2)
	5	Magnet Catcher	See Contrast table (2)
	6	Magnet Holder Assy	AEC1077
	7	Gear Damper	AXA1019
	8	Screw (2 x 3.5)	See Contrast table (2)
	9	Screw	BPZ30P080FTB
	10	Indicator Panel	See Contrast table (2)
	11	Door	See Contrast table (2)
	12	Front Panel	See Contrast table (2)
	13	Escutcheon Ring	See Contrast table (2)
NSP	14	Power Button	See Contrast table (2)
NSP	15	Operation Button	AAD4140
	16	Sealing Sheet	See Contrast table (2)
	17	Pioneer Name Plate	See Contrast table (2)
	18	Door Cushion	See Contrast table (2)
	19	Door Cushion S	See Contrast table (2)
NSP	20	LED Lens	AMR3452
	21	Rubber Foot	VEB1349
	22	Screw	BPZ30P080FTB

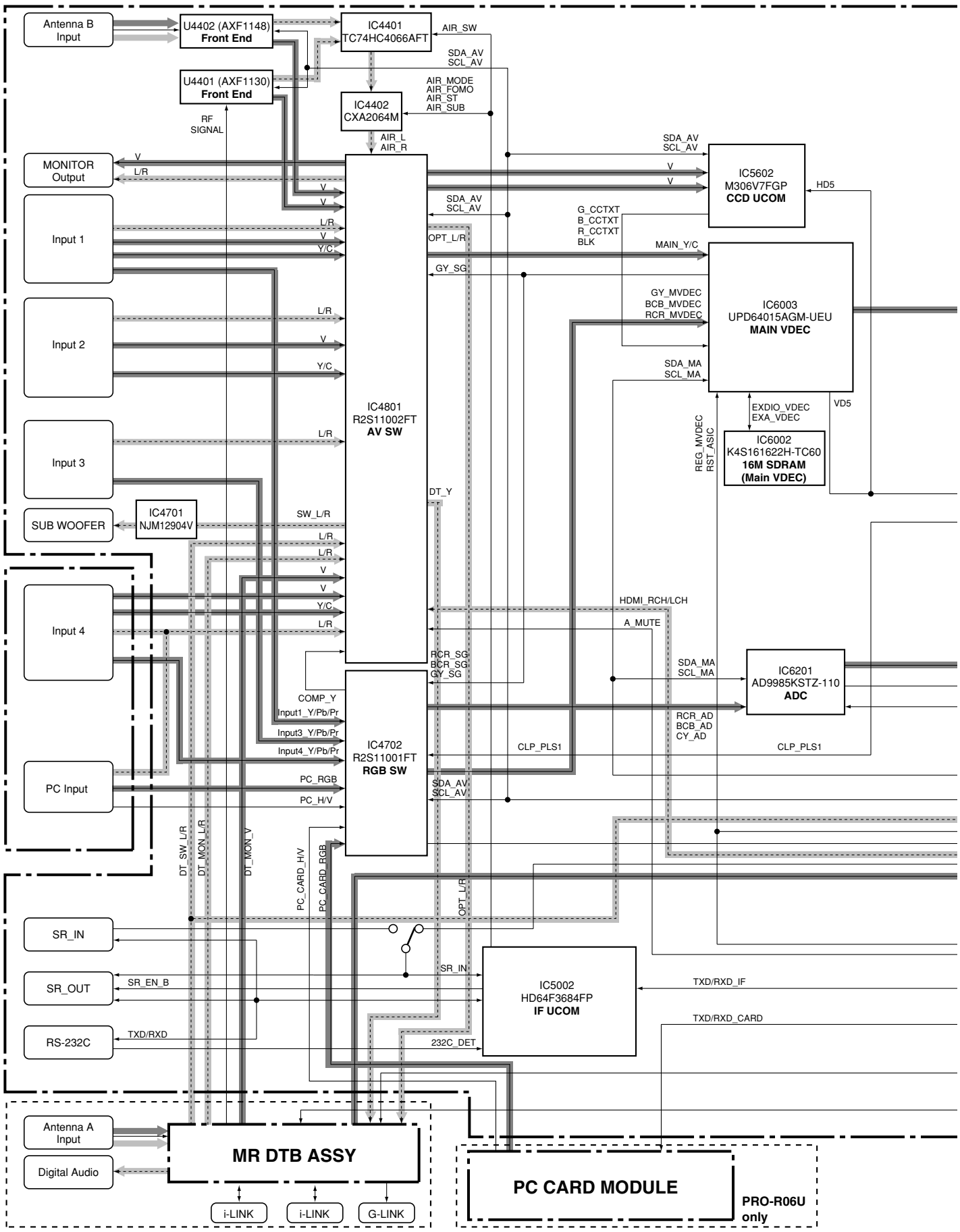
(2) CONTRAST TABLE

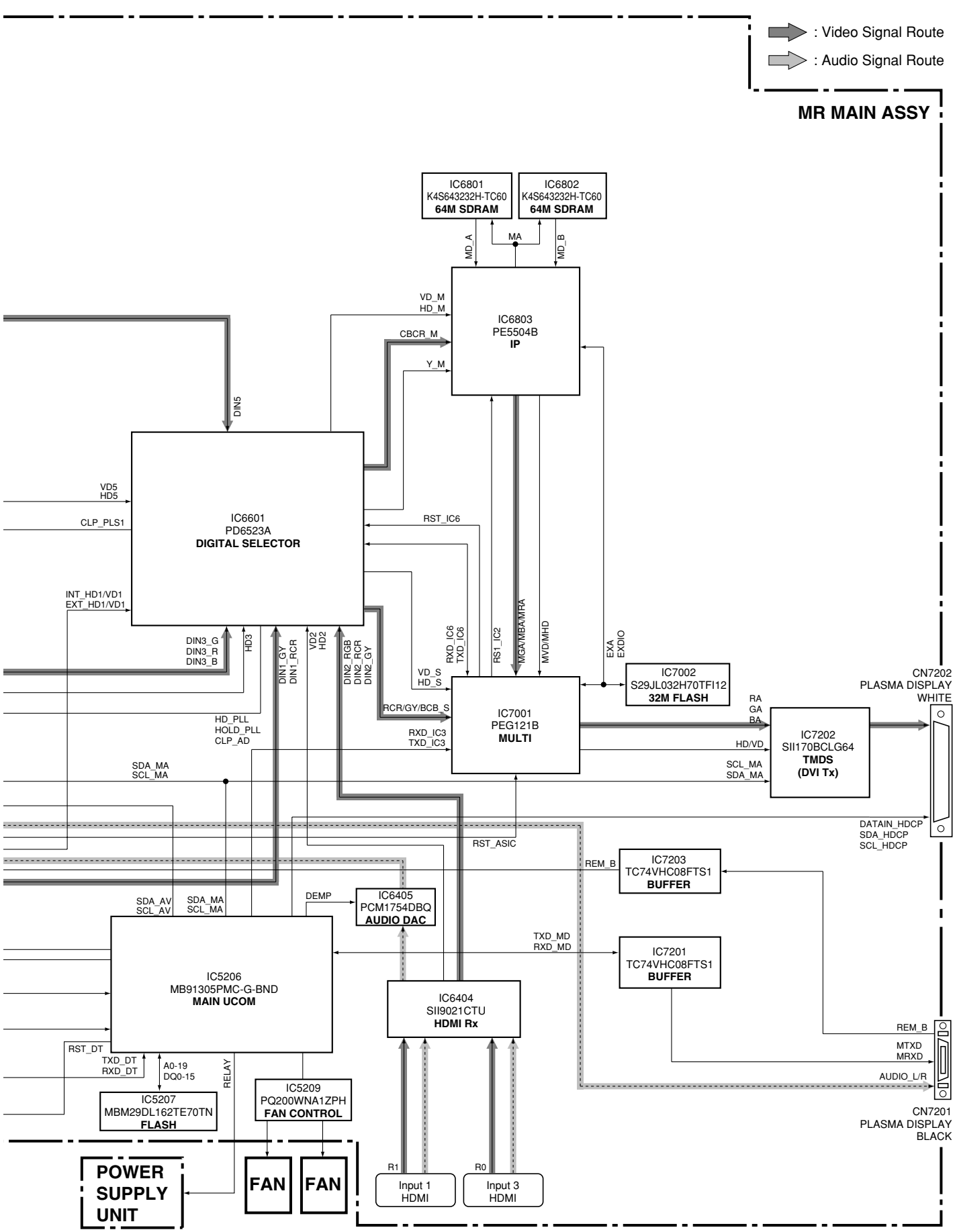
PDP-R06U/KUCXJ and PRO-R06U/KUCXJ are constructed the same except for the following:

Mark	No.	Symbol and Description	PDP-R06U/KUCXJ	PRO-R06U/KUCXJ
	4	Front Panel Assy U	AXG1036	Not used
	4	Front Panel Assy UE	Not used	AXG1031
	5	Magnet Catcher	ANG2820	ANG2821
	8	Screw (2 x 3.5)	ABA1329	ABA1330
	10	Indicator Panel (U)	AAK2847	Not used
	10	Indicator Panel (UE)	Not used	AAK2842
	11	Door (U)	AAN1484	Not used
	11	Door (UE)	Not used	AAN1480
	12	Front Panel (U)	AMB2872	Not used
	12	Front Panel (UE)	Not used	AMB2864
	13	Escutcheon Ring	AAD4134	Not used
	13	Escutcheon Ring (UE)	Not used	AAD4138
NSP	14	Power Button	AAD4135	Not used
NSP	14	Power Button (UE)	Not used	AAD4141
	16	Sealing Sheet (U)	AAL2674	Not used
	16	Sealing Sheet UE	Not used	AAL2666
	17	Pioneer Name Plate	AAM1107	VAM1109
	18	Door Cushion	AEB1412	Not used
	18	Door Cushion (UE)	Not used	AEB1419
	19	Door Cushion S	AEB1425	Not used
	19	Door Cushion S (UE)	Not used	AEB1426

3. BLOCK DIAGRAM

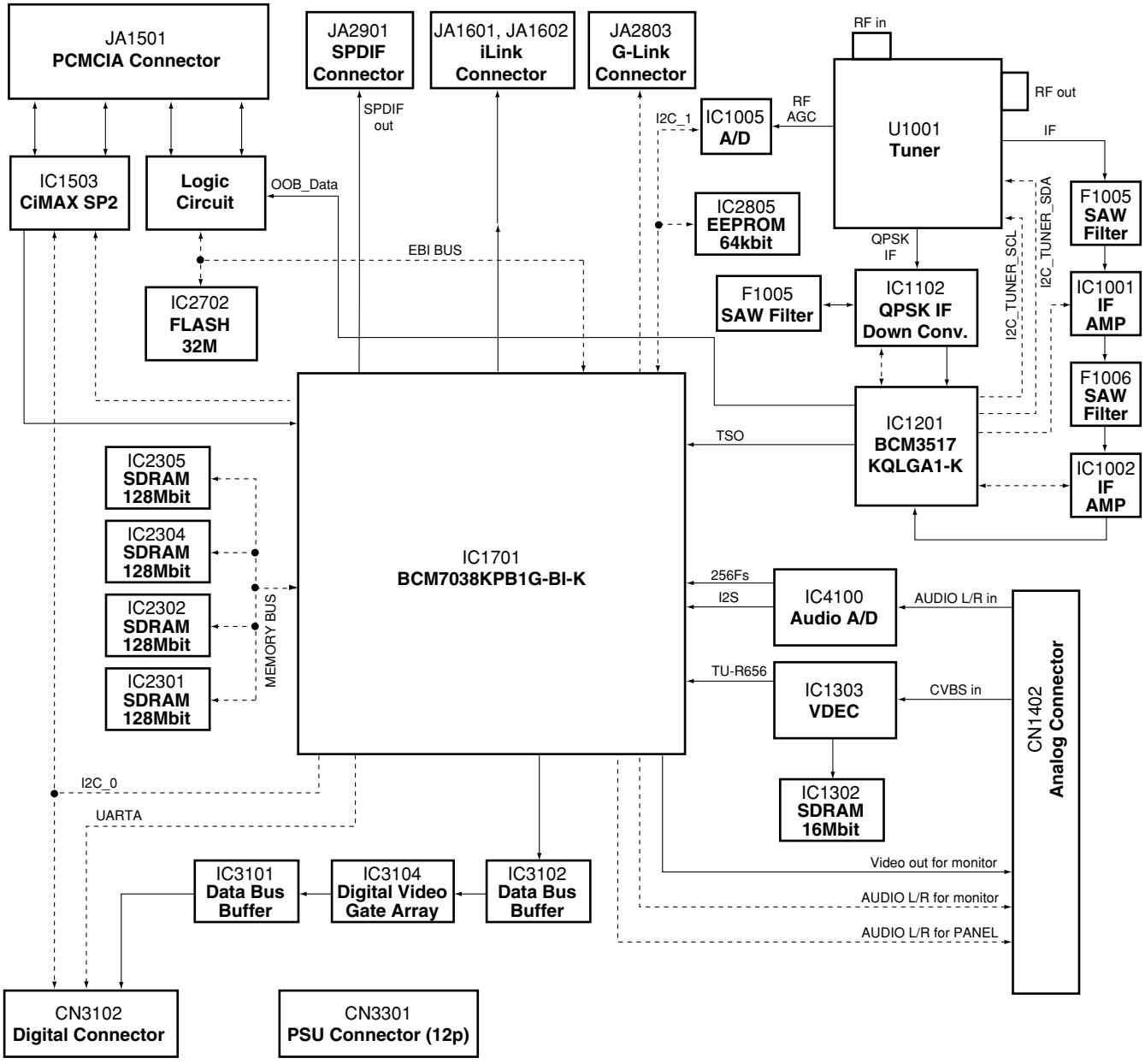
3.1 OVERALL BLOCK DIAGRAM



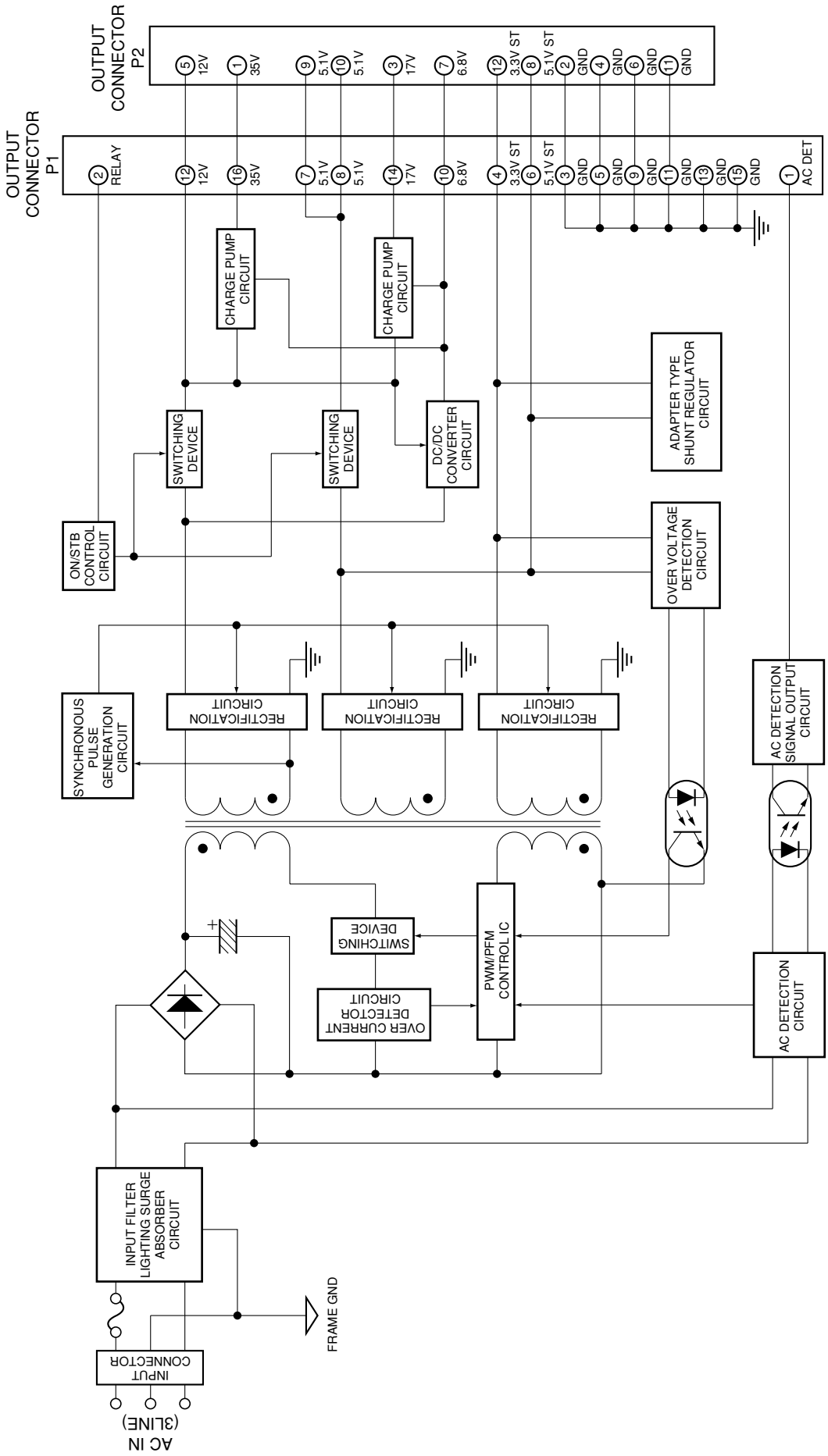

: Video Signal Route
: Audio Signal Route
MR MAIN ASSY
IC6801
K4S643232H-TC60
64M SDRAM
IC6802
K4S643232H-TC60
64M SDRAM
MD_A
MA
MD_B
IC6803
PE5504B
IP
VD_M
HD_M
CBCR_M
Y_M
DIN5
IC6601
PD6523A
DIGITAL SELECTOR
VD5
HD5
CLP_PLS1
INT_HD1/VD1
EXT_HD1/VD1
RST_IC6
DIN3_G
DIN3_R
DIN3_B
HD3
DIN1_GY
DIN1_RCR
VD2
HD2
DIN2_RGB
DIN2_RCR
DIN2_GY
RXD_IC6
TXD_IC6
RS1_IC2
MGA/MBA/MHA
MVD/MHD
EXA
EXDIO
IC7002
S29JL032H70TFI12
32M FLASH
VD_S
HD_S
RCR/GY/BCB_S
HD_PLL
HOLD_PLL
CLP_AD
RXD_IC3
TXD_IC3
IC7001
PEG121B
MULTI
RA
GA
BA
HD/VD
SCL_MA
SDA_MA
IC7202
SII170BCLG64
TMDS
(DVI Tx)
CN7202
PLASMA DISPLAY
WHITE
SDA_MA
SCL_MA
DATAIN_HDCP
SDA_HDCP
SCL_HDCP
RST_ASIC
REM_B
IC7203
TC74VHC08FTS1
BUFFER
SDA_AV
SCL_AV
SDA_MA
SCL_MA
DEMP
IC6405
PCM1754DBQ
AUDIO DAC
TXD_MD
RXD_MD
IC7201
TC74VHC08FTS1
BUFFER
IC5206
MB91305PMC-G-BND
MAIN UCOM
IC6404
SII9021CTU
HDMI Rx
REM_B
MTXD
MRXD
AUDIO_L/R
RST_DT
TXD_DT
RXD_DT
A0-19
DQ0-15
RELAY
IC5207
MBM29DL162TE70TN
FLASH
IC5209
PQ200WNA1ZPH
FAN CONTROL
CN7201
PLASMA DISPLAY
BLACK
R1
R0
Input 1
HDMI
Input 3
HDMI
POWER
SUPPLY
UNIT
FAN
FAN

3.2 MR DTB ASSY

MR DTB ASSY

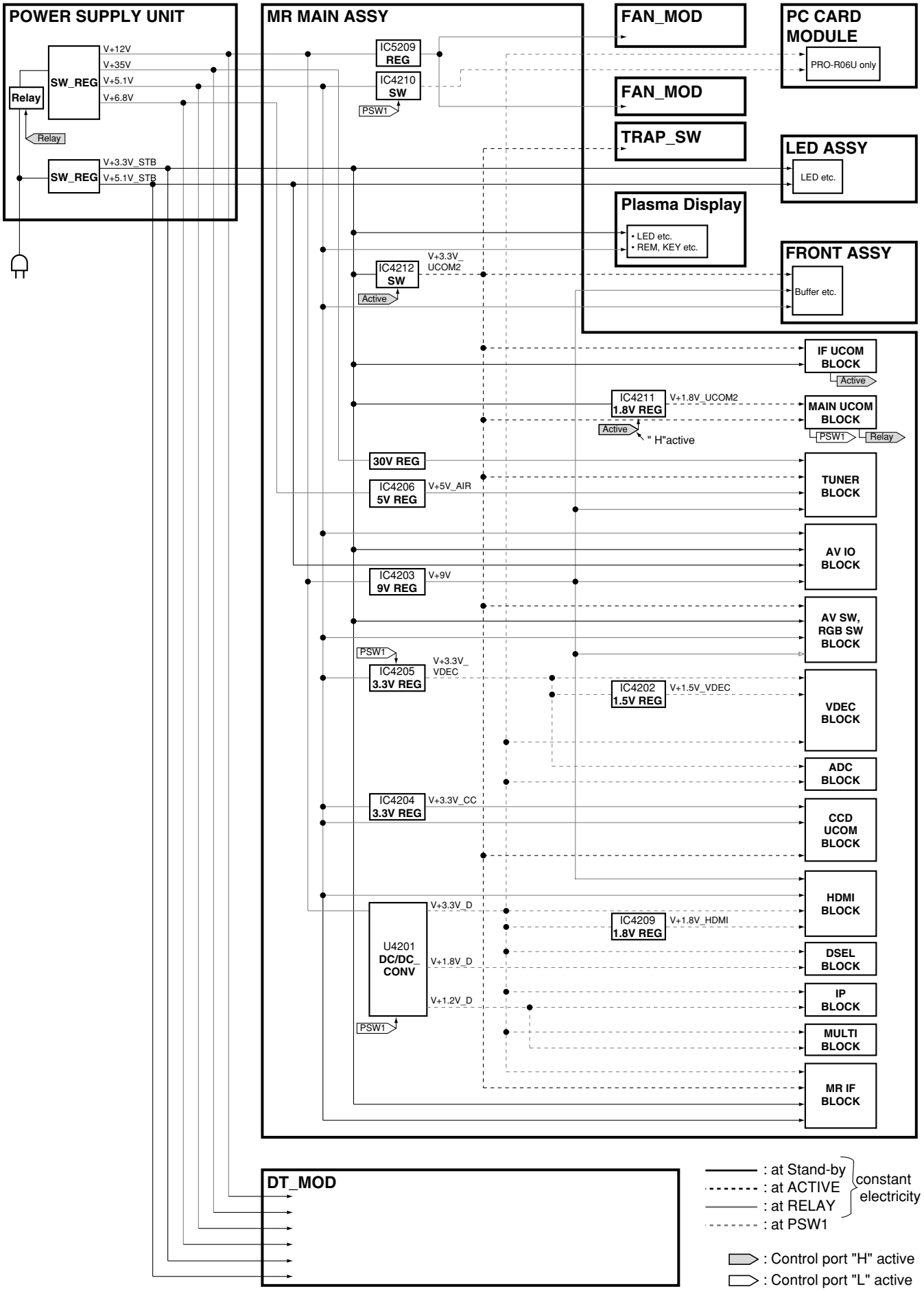


3.3 POWER SUPPLY UNIT



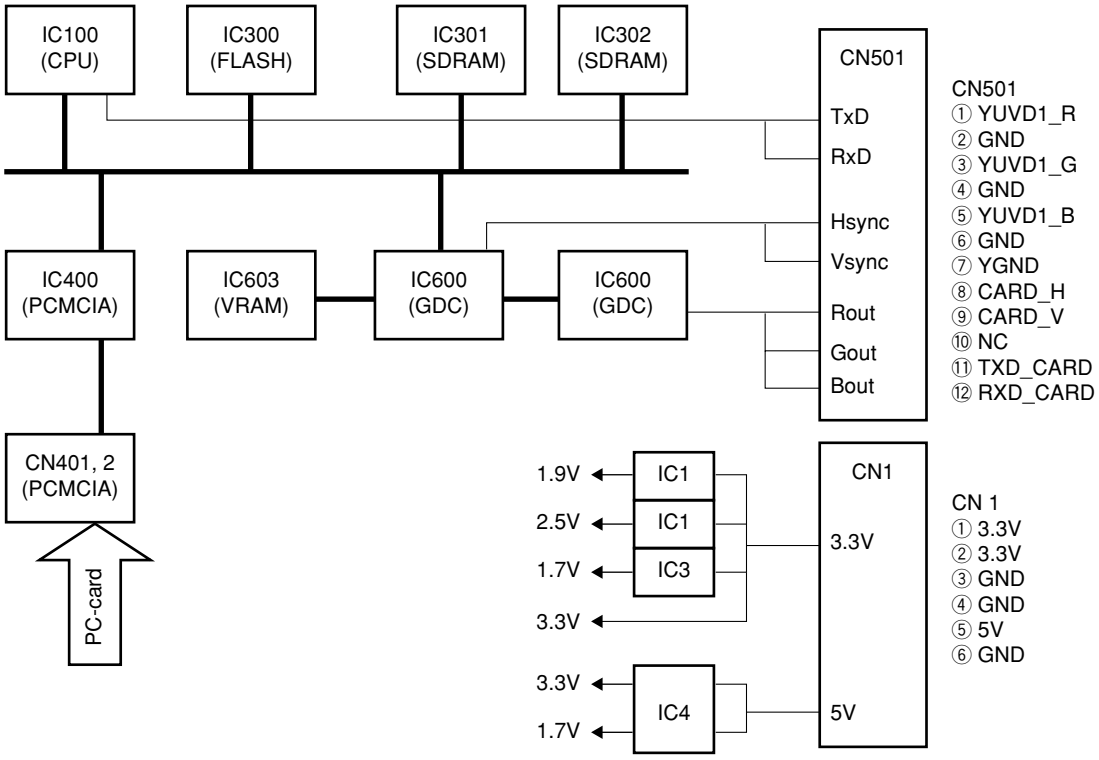
POWER SUPPLY UNIT

3.4 POWER SUPPLY SIGNAL ROUTE



3.5 PC CARD MODULE

PC CARD MODULE



3.6 VOLTAGES

FRONT ASSY — **MR MAIN ASSY**

CN7804 (AKM1236)		Voltage (V)	CN4001 (AKM1236)	
No.	Pin Name		Pin Name	No.
1	V+3_3V_STB	3.4	V+3_3V_STB	50
2	LED_ON	0	LED_ON	49
3	LED_OFF	3.4	LED_OFF	48
4	GND	0	GND	47
5	V+5_1V_STB	5.1	V+5_1V_STB	46
6	LED_FCT	3.4	LED_FCT	45
7	KEY_AD1	3.4	KEY_AD1	44
8	KEY_AD2	3.4	KEY_AD2	43
9	GND	0	GND	42
10	GND	0	GND	41
11	GND	0	GND	40
12	GND	0	GND	39
13	PC_V	0	PC_V	38
14	GND	0	GND	37
15	PC_H	0	PC_H	36
16	GND	0	GND	35
17	PC_G	2.5	PC_G	34
18	GND	0	GND	33
19	PC_B	2.5	PC_B	32
20	GND	0	GND	31
21	PC_R	2.5	PC_R	30
22	GND	0	GND	29
23	GND	0	GND	28
24	INPUT4_PLUG	0	INPUT4_PLUG	27
25	INPUT4_Y	2.5	INPUT4_Y	26
26	GND	0	GND	25
27	GND	0	GND	24
28	INPUT4_PB	2.5	INPUT4_PB	23
29	GND	0	GND	22
30	GND	0	GND	21
31	INPUT4_PR	2.5	INPUT4_PR	20
32	GND	0	GND	19
33	GND	0	GND	18
34	INPUT4_Y	2.5	INPUT4_Y	17
35	GND	0	GND	16
36	INPUT4_C	2.2	INPUT4_C	15
37	GND	0	GND	14
38	INPUT4_SPLUG	5.0	INPUT4_SPLUG	13
39	INPUT4_S2	0	INPUT4_S2	12
40	GND	0	GND	11
41	INPUT4_V	2.5	INPUT4_V	10
42	GND	0	GND	9
43	INPUT4_L	4.5	INPUT4_L	8
44	GND	0	GND	7
45	INPUT4_R	4.5	INPUT4_R	6
46	GND	0	GND	5
47	WE_ROM	0	WE_ROM	4
48	V+3_3V_UCOM	3.4	V+3_3V_UCOM	3
49	V+5V_A	5.0	V+5V_A	2
50	V+9V_A	9.0	V+9V_A	1

FRONT ASSY — **LED ASSY**

CN7803 (AKM1233)		Voltage (V)	CN8001 (CKS3826)	
No.	Pin Name		Pin Name	No.
1	GND	0	GND	12
2	GND	0	GND	11
3	GND	0	GND	10
4	GND	0	GND	9
5	KEY_AD2	3.4	KEY_AD2	8
6	KEY_AD1	3.4	KEY_AD1	7
7	LED_REC	3.4	LED_REC	6
8	V+5_1V_STB	5.1	V+5_1V_STB	5
9	LED_MDM	0	LED_MDM	4
10	LED_OFF	3.4	LED_OFF	3
11	LED_ON	0	LED_ON	2
12	V+3_3V_STB	3.4	V+3_3V_STB	1

FAN — **MR MAIN ASSY**

		Voltage (V)	CN4007 (AKM1274)	
No.	Pin Name		Pin Name	No.
–	–	7.0	FAN_12V	1
–	–	0	FAN_NG2	2
–	–	0	GND	3

FAN — **MR MAIN ASSY**

		Voltage (V)	CN4009 (AKM1274)	
No.	Pin Name		Pin Name	No.
–	–	7.0	FAN_12V	1
–	–	0	FAN_NG1	2
–	–	0	GND	3

TRAP-SW — **MR MAIN ASSY**

		Voltage (V)	CN4015 (AKM1213)	
No.	Pin Name		Pin Name	No.
–	–	3.4	TRAP_SW	1
–	–	–	–	2
–	–	3.4	V+3_3V_UCOM2	3

PC CARD MODULE — **MR MAIN ASSY**

CN501 (HFW12S-2STEI)		Voltage (V)	CN4003 (AKM1233)	
No.	Pin Name		Pin Name	No.
1	PC_CARD_R	0	PC_CARD_R	12
2	GND	0	GND	11
3	PC_CARD_G	0	PC_CARD_G	10
4	GND	0	GND	9
5	PC_CARD_B	0	PC_CARD_B	8
6	GND	0	GND	7
7	GND	0	GND	6
8	PC_CARD_H	3.3	PC_CARD_H	5
9	PC_CARD_V	3.3	PC_CARD_V	4
10	NC	0	NC	3
11	TXD_CARD	3.3	TXD_CARD	2
12	RXD_CARD	3.3	RXD_CARD	1

POWER SUPPLY UNIT — **MR MAIN ASSY**

CN101 (KM200NA16)		Voltage (V)	CN4006 (KM200NA16)	
No.	Pin Name		Pin Name	No.
16	V+35V	36.0	V+35V	16
15	GND	0	GND	15
14	V+17V	19.0	V+17V	14
13	GND	0	GND	13
12	V+12V	12.3	V+12V	12
11	GND	0	GND	11
10	V+6_8V	6.6	V+6_8V	10
9	GND	0	GND	9
8	V+5_1V	5.1	V+5_1V	8
7	V+5_1V	5.1	V+5_1V	7
6	V+5_1V_STB	5.1	V+5_1V_STB	6
5	GND	0	GND	5
4	V+3_3V_STB	3.4	V+3_3V_STB	4
3	GND	0	GND	3
2	RELAY	3.4	RELAY	2
1	AC_DET	3.4	AC_DET	1

POWER SUPPLY UNIT — **MR DTB ASSY**

CN102 (KM200NA12)		Voltage (V)	CN3301 (AKM1298)	
No.	Pin Name		Pin Name	No.
1	V+35V	36.0	V+35V	1
2	GND	0	GND	2
3	V+17V	19.0	V+17V	3
4	GND	0	GND	4
5	V+12V	12.3	V+12V	5
6	GND	0	GND	6
7	V+6_5V	6.6	V+6_5V	7
8	V+5_1V_STB	5.1	V+5_1V_STB	8
9	V+5_1V	5.1	V+5_1V	9
10	V+5_1V	5.1	V+5_1V	10
11	GND	0	GND	11
12	V+3_3V_STB	3.4	V+3_3V_STB	12

PC CARD MODULE — **MR MAIN ASSY**

CN1 (B8B-PH-SM3)		Voltage (V)	CN4002 (AKM1277)	
No.	Pin Name		Pin Name	No.
1	V+3V_CARD	3.3	V+3V_CARD	1
2	V+3V_CARD	3.3	V+3V_CARD	2
3	GND	0	GND	3
4	GND	0	GND	4
5	V+5V_CARD	5.1	V+5V_CARD	5
6	GND	0	GND	6

MR DTB ASSY **MR MAIN ASSY**

CN1402 (AKM1217)		Voltage (V)	CN4005 (AKM1303)	
No.	Pin Name		Pin Name	No.
1	GND	0	GND	1
2	GND	0	GND	2
3	DT_MON_R	4.8	DT_MON_R	3
4	GND	0	GND	4
5	DT_MON_L	4.8	DT_MON_L	5
6	GND	0	GND	6
7	DT_SP_R	4.8	DT_SP_R	7
8	GND	0	GND	8
9	DT_SP_L	4.8	DT_SP_L	9
10	GND	0	GND	10
11	OPT_R	0	OPT_R	11
12	GND	0	GND	12
13	OPT_L	0	OPT_L	13
14	GND	0	GND	14
15	NOT_USE	0	NOT_USE	15
16	GND	0	GND	16
17	GND	0	GND	17
18	NOT_USE	0	NOT_USE	18
19	GND	0	GND	19
20	GND	0	GND	20
21	NOT_USE	0	NOT_USE	21
22	GND	0	GND	22
23	GND	0	GND	23
24	DT_Y	2.2	DT_Y	24
25	GND	0	GND	25
26	GND	0	GND	26
27	DT_MON_V	2.9	DT_MON_V	27
28	GND	0	GND	28
29	GND	0	GND	29
30	NOT_USE	0	NOT_USE	30
31	GND	0	GND	31
32	GND	0	GND	32
33	TEMP3	0	TEMP3	33
34	GND	0	GND	34
35	GND	0	GND	35
36	LED_FCT	3.4	LED_FCT	36
37	RST3	0	RST3	37
38	RST_DT	3.4	RST_DT	38
39	DT_DET	0	DT_DET	39
40	GND	0	GND	40

MR DTB ASSY **MR MAIN ASSY**

CN3102 (AKM1236)		Voltage (V)	CN4004 (AKM1201)	
No.	Pin Name		Pin Name	No.
1	GND	0	GND	1
2	TXD_DT	3.4	TXD_DT	2
3	RXD_DT	3.4	RXD_DT	3
4	GND	0	GND	4
5	DT_FNC	0	DT_FNC	5
6	GND	0	GND	6
7	NC		NC	7
8	NC		NC	8
9	NC		NC	9
10	NC		NC	10
11	NC		NC	11
12	NC		NC	12
13	NC		NC	13
14	NC		NC	14
15	NC		NC	15
16	NC		NC	16
17	NC		NC	17
18	NC		NC	18
19	NC		NC	19
20	GND	0	GND	20
21	GND	0	GND	21
22	GND	0	GND	22
23	GND	0	GND	23
24	NC	0	NC	24
25	GND	0	GND	25
26	GND	0	GND	26
27	NC	0	NC	27
28	GND	0	GND	28
29	GND	0	GND	29
30	GND	0	GND	30
31	GND	0	GND	31
32	GND	0	GND	32
33	NC		NC	33
34	NC		NC	34
35	NC		NC	35
36	NC		NC	36
37	NC		NC	37
38	NC		NC	38
39	NC		NC	39
40	NC		NC	40
41	NC		NC	41
42	NC		NC	42
43	NC		NC	43
44	NC		NC	44
45	NC		NC	45
46	NC		NC	46
47	NC		NC	47
48	NC		NC	48
49	NC		NC	49
50	NC		NC	50

5. PCB PARTS LIST

NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
● *When ordering resistors, first convert resistance values into code form as shown in the following examples.*
Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω → 56 x 10[1] → 561 ..... RD1/4PU 5 6 1 J
47k Ω → 47 x 10[3] → 473 ..... RD1/4PU 4 7 3 J
0.5 Ω → R50 ..... RN2H R 5 0 K
1 Ω → 1R0 ..... RS1P 1 R 0 K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562 x 10[1] → 5621 ..... RN1/4PC 5 6 2 1 F

■ LIST OF HOLE PCB ASSEMBLIES

Mark	Symbol and Description	PDP-R06U/KUCXJ	PRO-R06U/KUCXJ
⚠	1..MR DTB ASSY	AWE1305	AWE1305
⚠	1..MR MAIN ASSY	AWV2225	AWV2223
NSP⚠	1..MR FUKUGO ASSY	AWV2226	AWV2224
	2..LED ASSY	AWW1045	AWW1045
	2..FRONT ASSY	AWW1046	AWW1044
⚠	1..POWER SUPPLY UNIT	AXY1113	AXY1113

MR MAIN ASSY

AWV2225 and AWV2223 are constructed the same except for the following :

Mark	Symbol and Description	AWV2225	AWV2223
	[BOARD IF BLOCK]		
	R4017,R4018	RS1/16SS474J	Not used
	R4024	Not used	RS1/16SS0R0J
	R4025	RS1/16SS0R0J	Not used
	CN4002 PH CONNECTOR 6P	Not used	AKM1277
	CN4003 12P FFC CONNECTOR	Not used	AKM1233
	[MR REG BLOCK]		
	IC4210	Not used	BD6522F
	Q4203	Not used	DTC124EUA
	F4204 EMI FILTER	Not used	CCG1162
	L4202 INDUCTOR	Not used	BTH1111
	L4206 CHIP FERRITE BEAD	Not used	BTX1042
	C4202,C4207,C4268	Not used	CKSSYF104Z16
	C4218 (10/6.3V)	Not used	ACG7046
	C4267	Not used	CEHVKW101M6R3
	R4202	Not used	RS1/16SS103J
	[AV IO BLOCK]		
	JA4601 4P MINI DIN SOCKET	AKP1234	AKP1235
	JA4605 9P PIN JACK	AKB1319	AKB1323
	[MAIN UCOM BLOCK]		
	R5243	Not used	RS1/16SS103J
	R5251	RS1/16SS103J	Not used
	[MR RGB SW BLOCK]		
	JA4701 9P PIN JACK	AKB1329	AKB1322

FRONT ASSY

AWW1046 and AWW1044 are constructed the same except for the following :

Mark	Symbol and Description	AWW1046	AWW1044
	R7869	Not used	RS1/16SS0R0J
	R7870	RS1/16SS0R0J	Not used
	JA7801 4P MINI DIN SOCKET	AKP1238	AKP1239
	JA7803 PIN JACK (3P)	AKB1303	AKB1304
	JA7805 PIN JACK (3P)	AKB1305	AKB1306

■ PCB PARTS LIST FOR PDP-R06U/KUCXJ UNLESS OTHER WISE NOTED

Mark	No.	Description	Part No.
MR DTB ASSY			
[TUNER IF BLOCK]			
SEMICONDUCTORS			
	IC1005		MCP3021A5-I/OTG
	IC1001,IC1002		UPC3219GV
	Q1002-Q1004		2SC5084
	Q1007		BB504CDS
	Q1005		DTC143EUA
COILS AND FILTERS			
	F1006	SAW FILTER	ATF1219
	F1005	SAW FILTER	BTF1130
	L1001,L1005	CHIP COIL	BTH1121
	L1004		LCTAW1R5J2520
	L1007		LCYA10NJ2520
	L1006		LCYAR82J2520
	F1002-F1004,F1007,F1008	FERRITE BEAD	VTF1084
CAPACITORS			
	C1022		ACH1429
	C1017		BCG1054
	C1010		CCSSCK2R0C50
	C1027		CEHVKW100M50
	C1003		CEHVKW101M6R3
	C1026		CKSQYB225K10
	C1028		CKSSYB102K50
	C1001,C1002,C1004-C1007		CKSSYB103K16
	C1011-C1014,C1018,C1019		CKSSYB103K16
	C1023-C1025,C1036-C1039		CKSSYB103K16
	C1016,C1029,C1031		CKSSYB104K10
RESISTORS			
	R1011		RS1/16SS1001F
	R1035		RS1/16SS1502F
	R1018		RS1/16SS2201F
	R1025		RS1/16SS4701F
	R1024		RS1/16SS4703F
	R1036		RS1/16SS5602F
	R1045		RS1/16SS6801F
	R1026		RS1/16SS6802F
	Other Resistors		RS1/16S###J
OTHERS			
	⚠U1001	DIGITAL FRONT END	AXF1151
[QPSK RX BLOCK]			
SEMICONDUCTORS			
	IC1102		UPC3220GR
COILS AND FILTERS			
	F1101	FERRITE BEAD	VTF1084
	F1102	SAW FILTER	ATF1215
	L1107		LCTAW1R5J2520
	L1104		LCYA56NJ2520
	L1103,L1105		LCYA68NJ2520
	L1102,L1108		LCYA82NJ2520
	L1106		LCYAR10J2520

Mark	No.	Description	Part No.
CAPACITORS			
	C1108		CCSSCH100D50
	C1106,C1115,C1124		CCSSCH101J50
	C1110		CCSSCH120J50
	C1107,C1109,C1117		CCSSCH270J50
	C1111,C1119		CCSSCH390J50
	C1118		CCSSCH560J50
	C1103,C1112,C1128,C1129		CKSSYB102K50
	C1133,C1134		CKSSYB102K50
	C1101,C1102,C1104,C1105,C1116		CKSSYB103K16
	C1121,C1122,C1127		CKSSYB103K16
	C1123		CKSSYB271K50
RESISTORS			
	All Resistors		RS1/16S###J
[F/E IC BLOCK]			
SEMICONDUCTORS			
	IC1201		BCM3517KQLGA1
COILS AND FILTERS			
	L1203	CHIP BEAD FILTER	BTX1042
	L1201		LCTAW1R8J2520
	F1201,F1202,F1204-F1206	FERRITE BEAD	VTF1084
CAPACITORS			
	C1235,C1257-C1259		BCG1054
	C1201,C1203,C1218		BCG1059
	C1229,C1234		CCSSCH120J50
	C1228,C1233		CCSSCH9R0D50
	C1250		CKSSYB102K50
	C1204-C1214,C1216,C1217		CKSSYB103K16
	C1219-C1225,C1230,C1231		CKSSYB103K16
	C1237-C1239,C1241-C1249		CKSSYB103K16
	C1252-C1255		CKSSYB103K16
	C1215,C1236,C1251,C1256		CKSSYB104K10
RESISTORS			
	R1201,R1227-R1229		RAB4CQ330J
	R1213,R1217		RS1/16S3010F
	Other Resistors		RS1/16S###J
OTHERS			
	X1201	CRYSTAL RESONATOR	BSS1134
[VIDEO IC BLOCK]			
SEMICONDUCTORS			
	IC1302		HY57V161610ETP-8
	IC1303		TVP5160PNP
	Q1301-Q1303,Q1306		2SC4081
COILS AND FILTERS			
	L1301		LCYA220J2520
	F1301-F1305,F1307	FERRITE BEAD	VTF1084
CAPACITORS			
	C1302,C1315,C1348,C1349		BCG1054
	C1336		BCG1059
	C1337		CCSSCH470J50
	C1342		CCSSCH560J50
	C1341		CCSSCH7R0D50

Mark No.	Description	Part No.
	C1346,C1347	CCSSCH8R0D50
	C1301	CKSSYB102K50
	C1335,C1350,C1353,C1354	CKSSYB103K16
A	C1303-C1314,C1316-C1334	CKSSYB104K10
	C1338-C1340,C1343-C1345	CKSSYB104K10
	C1351,C1352	CKSSYB104K10
	RESISTORS	
	R1301,R1302	RAB4CQ101J
	R1309	RS1/16SS1201F
	R1311,R1319,R1377	RS1/16SS6800F
	Other Resistors	RS1/16S###J
	OTHERS	
B	X1301 CRYSTAL RESONATOR (14.31818MHz)	BSS1119
	[A-A/D, AV-IF BLOCK]	
	SEMICONDUCTORS	
	IC1404	NJM2068V
	IC1402	PCM1803DB
	COILS AND FILTERS	
	F1401,F1402,F1404 FERRITE BEAD	VTF1084
	CAPACITORS	
C	C1401,C1402,C1412,C1418,C1419	BCG1054
	C1403,C1408	BCG1059
	C1416,C1421	CKSRYB105K10
	C1406,C1413,C1417,C1422	CKSSYB103K16
	C1404,C1409,C1414,C1423,C1424	CKSSYB104K10
	C1407,C1420	CKSSYB271K50
	C1405	DCH1165
	RESISTORS	
	R1414,R1436	RS1/16SS1002F
	R1412,R1429	RS1/16SS2402F
D	Other Resistors	RS1/16S###J
	OTHERS	
	CN1402 40P CONNECTOR	AKM1217
	[POD IC BLOCK]	
	SEMICONDUCTORS	
	IC1503	CIMAXSP2L
	IC1504	SN74LVC244APW
	IC1502	SN74LVC245APW
	IC1506	SN74LVC257APW
E	IC1505,IC1507	SN74LVC373APW
	CAPACITORS	
	C1510	CCSSCH680J50
	C1513-C1516	CKSSYB102K50
	C1502-C1509,C1511,C1512	CKSSYB104K10
	RESISTORS	
	R1557	RAB4CQ0R0J
	R1510,R1521,R1549	RAB4CQ103J
	R1517-R1520,R1526-R1529,R1531	RAB4CQ470J
	R1534,R1535,R1539-R1543,R1545	RAB4CQ470J
	Other Resistors	RS1/16S###J
F	**OTHERS**	
	JA1501 PC CARD CONNECTOR	AKP1287

Mark No.	Description	Part No.
	[IEEE1394 BLOCK]	
	SEMICONDUCTORS	
	IC1606	CY2305SC-1H
	IC1604	PST3622NR
	IC1605	SN74LVC125APW
	IC1601,IC1603	SN74LVC1G08DCK
	IC1602	TSB43CA42ZGW
	Q1601	DTC124EUA
	COILS AND FILTERS	
	L1605-L1608 CHOKE COIL	ATH1160
	F1601,F1603 EMI FILTER	DTL1106
	F1602,F1604 FERRITE BEAD	VTF1084
	CAPACITORS	
	C1638-C1640	BCG1054
	C1634,C1635	CCSSCH221J50
	C1610,C1616	CCSSCH6R0D50
	C1633,C1637	CKSRYB105K10
	C1611,C1618,C1624	CKSSYB102K50
	C1601,C1603,C1623,C1625-C1630	CKSSYB103K16
	C1636	CKSSYB103K16
	C1602,C1604-C1609,C1612,C1613	CKSSYB104K10
	C1617,C1619-C1622,C1631,C1632	CKSSYB104K10
	RESISTORS	
	R1606-R1612	RAB4CQ0R0J
	R1634	RAB4CQ330J
	R1635-R1639,R1649,R1652	RAB4CQ472J
	R1676,R1677	RAB4CQ472J
	R1653	RS1/16S6341D
	R1674,R1675	RS1/16SS5101F
	R1659-R1663,R1671-R1673	RS1/16SS56R0D
	Other Resistors	RS1/16S###J
	OTHERS	
	JA1601,JA1602 IEEE1394 CONNECTOR	AKP1289
	X1601 CRYSTAL RESONATOR (24.576MHz)	ASS1202
	[BACK END IC BLOCK]	
	SEMICONDUCTORS	
	IC1701	BCM7038KPB1G-B1
	Q2201	RN1901
	COILS AND FILTERS	
	F1701-F1709 FERRITE BEAD	VTF1084
	F1901 FERRITE BEAD	VTF1084
	F2001-F2003 FERRITE BEAD	VTF1084
	F2201-F2209 FERRITE BEAD	VTF1084
	CAPACITORS	
	C1752	ACH1421
	C1712	ACH1429
	C2205	BCG1054
	C1734,C1742,C1747,C1751,C1909	BCG1059
	C2208	CCSSCH150J50
	C1702,C1704,C1711,C1715,C1722	CKSSYB103K16
	C1729,C1730,C1732,C1736,C1738	CKSSYB103K16
	C1744,C1745,C1749,C1907,C2007	CKSSYB103K16
	C2009,C2011,C2201,C2203,C2207	CKSSYB103K16
	C2215,C2217,C2222,C2225,C2227	CKSSYB103K16

Mark No.	Description	Part No.
	C2229	CKSSYB103K16
	C1701,C1703,C1705-C1710	CKSSYB104K10
	C1713,C1714,C1716-C1721	CKSSYB104K10
	C1723-C1728,C1731,C1733,C1735	CKSSYB104K10
	C1737,C1739-C1741,C1743,C1746	CKSSYB104K10
	C1748,C1750,C1902,C1903,C1908	CKSSYB104K10
	C2001,C2008,C2010,C2012,C2202	CKSSYB104K10
	C2204,C2206,C2216,C2218,C2223	CKSSYB104K10
	C2226,C2228,C2230	CKSSYB104K10
	RESISTORS	
	R2249,R2250	RAB4CQ101J
	R1715	RAB4CQ330J
	R2002,R2006	RAB4CQ470J
	R1807-R1818	RAB4CQ472J
	R2204	RS1/16SS1002F
	R2208,R2209	RS1/16SS1101F
	R2201-R2203,R2205-R2207	RS1/16SS75R0F
	Other Resistors	RS1/16S###J
	[DDR SDRAM BLOCK]	
	SEMICONDUCTORS	
	IC2303	BD3533F
	IC2301,IC2302,IC2304,IC2305	MT46V16M16P-6TF
	CAPACITORS	
	C2301,C2306,C2311,C2312,C2329	BCG1054
	C2352	BCG1054
	C2253,C2255	BCG1059
	C2313	CEHVKW101M6R3
	C2302-C2305,C2307-C2310	CKSSYB103K16
	C2315,C2316,C2319,C2320	CKSSYB103K16
	C2323,C2324,C2327,C2328	CKSSYB103K16
	C2330-C2339,C2342,C2343	CKSSYB103K16
	C2346,C2347,C2350,C2351	CKSSYB103K16
	C2318,C2322,C2341,C2345	CKSSYB104K10
	C2317,C2321,C2340,C2344	CKSSYB471K50
	RESISTORS	
	All Resistors	RS1/16S###J
	[BUS TERMINAL BLOCK]	
	COILS AND FILTERS	
	F2601-F2603 FERRITE BEAD	VTF1084
	CAPACITORS	
	C2509-C2511	BCG1054
	C2501-C2508	CKSSYB103K16
	C2601-C2611	CKSSYB104K10
	RESISTORS	
	R2501-R2508,R2552-R2559	RAB4CQ101J
	R2509-R2525,R2530-R2543	RAB4CQ220J
	R2545-R2548,R2560,R2561	RAB4CQ220J
	R2564,R2565,R2568-R2573	RAB4CQ220J
	R2526-R2528,R2549,R2550	RAB4CQ510J
	R2562,R2563,R2566,R2567	RAB4CQ510J
	Other Resistors	RS1/16S###J

Mark No.	Description	Part No.
	[FLASH, E2P BLOCK]	
	SEMICONDUCTORS	
	IC2805	BR24L64F-W
	IC2702	PC28F256J3C125
	IC2804	PST3622NR
	IC2701	SN74AHC2G02HDCT
	Q2804	2SA1576A
	Q2805	2SC4081
	Q2806	UMD2N
	D2802	RB501V-40
	D2801,D2803	UDZS4R7(B)
	COILS AND FILTERS	
	L2802	LCTAW2R2J2520
	CAPACITORS	
	C2801	BCG1054
	C2810-C2812,C2816,C2817	CCSRCH101J50
	C2820,C2821	CCSRCH101J50
	C2803,C2804	CCSSCH120J50
	C2802,C2806	CCSSCJ3R0C50
	C2822	CKSQYB105K16
	C2702-C2706,C2813,C2818,C2819	CKSSYB103K16
	C2701	CKSSYB104K10
	C2808	CKSSYF104Z16
	RESISTORS	
	R2702	RAB4CQ101J
	R2704	RAB4CQ472J
	R2803,R2808	RS1/16S3010F
	Other Resistors	RS1/16S###J
	OTHERS	
	JA2803 MINI JACK (4P)	AKN1073
	CN2701 80P CONNECTOR	BKP1159
	X2801 CRYSTAL RESONATOR	BSS1134
	[A/V OUT BLOCK]	
	SEMICONDUCTORS	
	IC3001,IC3002,IC3004,IC3005	NJM2068V
	Q2901	2SA1576A
	COILS AND FILTERS	
	L3001,L3002 CHIP COIL	BTH1107
	F2901 FERRITE BEAD	VTF1084
	CAPACITORS	
	C2902	BCG1059
	C3003,C3013,C3023,C3036	CCSRCH331J50
	C3001,C3004,C3014,C3015	CCSSCH220J50
	C3024,C3025,C3037,C3038	CCSSCH220J50
	C3006,C3010,C3029,C3032	CCSSCH560J50
	C3020,C3021,C3042,C3043	CKSSYB103K16
	C2924	CKSSYB104K10
	C3007,C3017,C3026,C3039	CKSSYB391K50
	C3009,C3012,C3031,C3035	CKSSYB821K50
	C2904	CKSSYF104Z16
	C3019,C3041	DCH1165
	RESISTORS	
	R3005,R3006,R3023,R3024	RS1/16SS3302F
	R3039,R3040,R3062,R3063	RS1/16SS3302F
	Other Resistors	RS1/16S###J

Mark No.	Description	Part No.
	OTHERS	
	JA2901 OPTICAL OUTPUT JACK	TOTX179PL
	[DVD I/F BLOCK]	
	SEMICONDUCTORS	
	IC3104	PE5436A
	IC3101,IC3102	SN74AVC16827DGG
	COILS AND FILTERS	
	F3101,F3103 FERRITE BEAD	VTF1084
	CAPACITORS	
	C3102,C3116,C3117	BCG1054
	C3137-C3141	CCSSCH221J50
	C3101,C3109-C3115	CKSRYB105K10
	C3118-C3131	CKSSYB102K50
	C3103-C3108,C3132,C3133	CKSSYB104K10
	C3134-C3136	CKSSYB471K50
	RESISTORS	
	R3121	RAB4CQ0R0J
	R3104,R3119,R3122,R3133,R3134	RAB4CQ330J
	R3145	RAB4CQ330J
	R3108,R3109,R3113	RAB4CQ470J
	Other Resistors	RS1/16S###J
	OTHERS	
	CN3102 50P CONNECTOR	AKM1236
	[POWER BLOCK (1/2)]	
	SEMICONDUCTORS	
	IC3315	MM1563DF
	IC3301,IC3306	MM1565AF
	IC3309	NJM2370U09
	IC3316	NJM2846DL3-18
	IC3302,IC3305,IC3307	NJM2846DL3-33
	IC3304	NJM2871BF05
	Q3309	2SC4081
	D3308	1SS355
	D3302-D3305,D3307,D3309,D3310	RB501V-40
	D3314,D3316	RB501V-40
	D3317	UDZS30(B)
	COILS AND FILTERS	
	L3304 CHIP BEAD FILTER	BTX1042
	F3301,F3302 FERRITE BEAD	VTF1084
	CAPACITORS	
	C3302,C3304,C3305,C3313,C3314	BCG1054
	C3321,C3363,C3409,C3411	BCG1054
	C3356	BCG1059
	C3323	BCG1060
	C3311	BCG1064
	C3324	CEHVKW100M50
	C3407	CEHVKW470M16
	C3301,C3319,C3353	CKSQYB105K16
	C3354	CKSQYB225K10
	C3308,C3362	CKSRYB105K10
	C3310	CKSSYB102K50
	C3307	CKSSYB103K16
	C3318,C3322,C3351	CKSSYB471K50
	C3306,C3309,C3325,C3326,C3364	CKSSYF104Z16
	C3401,C3408,C3410,C3412	CKSSYF104Z16
	RESISTORS	
	All Resistors	RS1/16S###J
	OTHERS	
	CN3301 12P CONNECTOR	AKM1298
	[POWER BLOCK (2/2)]	
	SEMICONDUCTORS	
	IC3312	BA00BC0WFP
	IC3314,IC3318	PST623XW
	IC3310,IC3313,IC3317,IC3321	R1224N102H
	Q3301,Q3305	2SA1576A
	Q3302,Q3303,Q3306,Q3311	CPH6311
	Q3307	DTC124EUA
	Q3304,Q3308,Q3310	RN1901
	D3311,D3312,D3315,D3318	D1FM3
	COILS AND FILTERS	
	L3302,L3305 INDUCTOR	ATH1161
	L3301,L3317 CHOKE COIL	ATH1192
	L3307,L3308 CHIP BEAD FILTER	BTX1042
	CAPACITORS	
	C3338,C3346	ACH1429
	C3332,C3334,C3337,C3339,C3347	BCG1054
	C3357,C3359	BCG1054
	C3344	BCG1059
	C3335,C3358	CEHVKW101M6R3
	C3345	CEHVKW470M16
	C3331,C3333,C3340-C3342,C3360	CKSRYF105Z10
	C3336,C3343	CKSSYB102K50
	C3316,C3317,C3329,C3361	CKSSYB103K16
	C3441	CKSSYB152K50
	C3367	CKSSYB682K25
	C3330	CKSSYF104Z16
	RESISTORS	
	R3352,R3353	RS1/10S271J
	R3375,R3421	RS1/16SS1002F
	R3382,R3422	RS1/16SS1003F
	R3348	RS1/16SS1103F
	R3381,R3425	RS1/16SS1202F
	R3344	RS1/16SS1503F
	R3323,R3354	RS1/16SS2202F
	R3355	RS1/16SS3302F
	R3328	RS1/16SS5102F
	R3380,R3384	RS1/16SS5602F
	R3349	RS1/16SS9102F
	R3314-R3316	RS1/4S1R5J
	R3337,R3338	RS1/4S3R3J
	Other Resistors	RS1/16S###J
	OTHERS	
	8008 INSULATION SHEET	AAK2862
	8001 THERMAL SHEET B	AEB1417
	8101 CASE TOP U	ANG2787
	8102 CASE BOTTOM	ANG2898
	8103 HEAT SINK B	ANH1645

Mark No.	Description	Part No.
8006	GASKET	ANK1789
8007	GASKET	ANK1790
8301	SCREW	BBB30P080FTC
8302	SCREW	BBZ30P060FTC
8303	SCREW	PMB20P100FTC

MR MAIN ASSY

[BOARD IF BLOCK]

SEMICONDUCTORS

Q4001	DTA124EUA
D4001	1SS355

RESISTORS

R4008,R4010	BCN1070
R4011	RAB4CQ0R0J
R4021-R4023	RS1/10S0R0J
Other Resistors	RS1/16S###J

OTHERS

CN4004 50P CONNECTOR	AKM1201
CN4015 3P CONNECTOR	AKM1213
CN4001 50P CONNECTOR	AKM1236
CN4007,CN4009 3P CONNECTOR	AKM1274
CN4005 40P CONNECTOR	AKM1303

[MR REG BLOCK]

SEMICONDUCTORS

IC4212	BD6522F
IC4211	MM1661JH
IC4202	NCP1117ST15
IC4209	NCP1117ST18
IC4204,IC4205	PQ033ENA1ZPH
IC4206	PQ050DNA1ZPH
IC4203	PQ090DNA1ZPH
Q4201	DTC124EUA
D4202-D4206,D4209,D4211	1SS355

COILS AND FILTERS

L4201 INDUCTOR	BTH1111
⚠L4203 CHIP BEAD FILTER	BTX1042
⚠F4201-F4203,F4205,F4207	CCG1162
EMI FILTER	BTH1111

CAPACITORS

C4206,C4209,C4215 (10/6.3V)	ACG7046
C4220,C4240,C4250 (10/6.3V)	ACG7046
C4253,C4257 (10/6.3V)	ACG7046
C4260,C4263 (10/6.3V)	ACG7046
C4213 (100UF/16V)	ACH1394
C4210,C4244,C4269	ACH1429
C4273	CCSSCH101J50
C4216,C4219,C4221,C4222,C4224	CEHVKW101M6R3
C4228,C4238,C4264	CEHVKW101M6R3
C4226	CEHVKW220M16
C4214	CKSRYB104K16
C4217,C4223	CKSRYB105K10
C4229,C4252	CKSSYB104K10
C4232	CKSSYB471K50
C4204,C4212,C4227,C4251	CKSSYF104Z16
C4261,C4262	CKSSYF104Z16
C4211,C4225,C4256	DCH1165

Mark No.	Description	Part No.

RESISTORS

R4225	RS1/10S0R0J
Other Resistors	RS1/16S###J

OTHERS

U4201 DD CONTROL UNIT	AXY1117

[MR TUNER BLOCK]

SEMICONDUCTORS

IC4402	CXA2064M
IC4401	TC74HC4066AFT
Q4406,Q4414	2SA1586
Q4401,Q4402,Q4405,Q4408,Q4409	2SC4116
Q4416-Q4418	2SC4116
Q4404	DTA124EUA
Q4403,Q4407,Q4413,Q4415	HN1B04FU
Q4410	HN1C01FU
D4401	1SS355
D4402	UDZS30(B)

COILS AND FILTERS

L4401-L4404 CHIP COIL	BTH1121
F4401-F4404 FERRITE CORE	VTF1080

CAPACITORS

C4419,C4425,C4427 (4.7U/10V)	ACG1122
C4430,C4440,C4441 (4.7U/10V)	ACG1122
C4412,C4443 (10/6.3V)	ACG7046
C4445 (100UF/16V)	ACH1394
C4421	ACH1417
C4420	ACH1418
C4450	CCSRCH331J50
C4414,C4447	CCSRCH821J50
C4401	CEHVKW100M50
C4405,C4406,C4434,C4435	CEHVKW101M6R3
C4436	CEHVKW220M16
C4422,C4428,C4451,C4452	CKSRYB105K10
C4442	CKSRYB123K50
C4407,C4431	CKSRYF104Z50
C4402,C4415,C4416	CKSSYB102K50
C4423	CKSSYB272K50
C4424	CKSSYB473K16
C4429	CKSSYB562K25
C4410,C4411,C4439	CKSSYF104Z16
C4418,C4426,C4444,C4446	DCH1165

RESISTORS

R4401	ACN1199
R4430,R4431	RS1/16SS1002F
R4437	RS1/16SS6802F
VR4401	CCP1394
VR4402-VR4404	CCP1396
Other Resistors	RS1/16S###J

OTHERS

⚠U4401 TV FRONT END SYSTEM	AXF1130
⚠U4402 FRONT END (US)	AXF1148

Mark No.	Description	Part No.
	[AV IO BLOCK]	
	SEMICONDUCTORS	
	IC4601	MAX3232CPW
	IC4603	TC74VHC00FTS1
	IC4602	TC74VHC125FTS1
	Q4605-Q4607,Q4612,Q4615	2SA1586
	Q4609,Q4610,Q4613	2SC4116
	Q4602,Q4603	2SC5233
	Q4601	DTA124EUA
	Q4604,Q4611,Q4614,Q4616	DTC124EUA
	Q4608	HN1A01FU
	D4601	1SS301
	D4602,D4618-D4621	1SS355
	CAPACITORS	
	C4607 (10/6.3V)	ACG7046
	C4601,C4608	ACH1419
	C4632,C4634	CEHVKW100M16
	C4610,C4612,C4617-C4620	CKSRYB105K10
	C4625,C4626	CKSRYB105K10
	C4611,C4615,C4616,C4622-C4624	CKSSYB103K16
	C4614,C4621	CKSSYB473K16
	C4606,C4627-C4631,C4633,C4635	CKSSYF104Z16
	C4602,C4605,C4609,C4613	DCH1165
	RESISTORS	
	R4619	RS1/10S121J
	R4611	RS1/10S151J
	R4624,R4625,R4627,R4633	RS1/16S75R0F
	R4635,R4636	RS1/16S75R0F
	Other Resistors	RS1/16S###J
	OTHERS	
	JA4605 9P PIN JACK	AKB1319
	JA4603 MINI JACK (4P)	AKN1073
	CN4602 9P D-SUB SOCKET	AKP1213
	JA4601 DUAL 4P MINI DIN (S)	AKP1234
	JA4604 REMOTE CONTROL JACK	RKN1004
	[MR AV SW BLOCK]	
	SEMICONDUCTORS	
	IC4803	NJM12904V
	IC4801	R2S11002FT
	Q4801-Q4803,Q4805,Q4806	2SA1586
	Q4811,Q4812	2SA1586
	Q4807,Q4810,Q4813,Q4814	2SC4116
	Q4808,Q4815	DTA124EUA
	Q4809,Q4816	DTC124EUA
	D4801	1SS301
	CAPACITORS	
	C4834	ACG1122
	C4818,C4822 (10/6.3V)	ACG7046
	C4825,C4828,C4832,C4833	CCG1205
	C4847,C4850	CCSRCH181J50
	C4852,C4855	CCSRCH681J50
	C4819	CEHVKW101M6R3
	C4802,C4804,C4806,C4807	CKSRYB105K10
	C4810,C4811,C4813,C4817	CKSRYB105K10
	C4820,C4821,C4823,C4824,C4827	CKSRYB105K10
	C4837,C4838,C4848,C4849	CKSRYB105K10

Mark No.	Description	Part No.
	C4808,C4809	CKSSYB104K10
	C4801,C4803,C4805,C4812	CKSSYF104Z16
	C4814-C4816,C4830,C4841,C4844	CKSSYF104Z16
	C4853,C4854	CKSSYF104Z16
	C4826,C4829,C4831,C4842,C4843	DCH1165
	C4845,C4846	DCH1165
	RESISTORS	
	R4819,R4821	RS1/16S1800F
	R4818,R4820	RS1/16S5600F
	Other Resistors	RS1/16S###J
	[IF UCOM BLOCK]	
	SEMICONDUCTORS	
	IC5002	HD64F3684FP
	IC5003	PST9230N
	IC5001	TC74VHC08FTS1
	IC5004	TC7W126FU
	Q5001	DTC124EUA
	CAPACITORS	
	C5007,C5008	CCSSCH180J50
	C5001	CEHVKW101M6R3
	C5010	CKSSYB472K25
	C5002-C5005,C5009,C5012	CKSSYF104Z16
	RESISTORS	
	R5002,R5004,R5007,R5025,R5026	RAB4CQ103J
	Other Resistors	RS1/16S###J
	OTHERS	
	X5002 CERAMIC RESONATOR	ASS1168
	X5001 CRYSTAL OSCILLATOR	ASS1172
	[MAIN UCOM BLOCK]	
	SEMICONDUCTORS	
	IC5202	BR24L64F-W
	IC5206	MB91305PMC-G-BND
	IC5207	MBM29DL162TE70TN
	IC5210	MM1522XU
	IC5209	PQ200WNA1ZPH
	IC5203	PST3628UR
	IC5201,IC5204	TC74VHC125FTS1
	Q5202	2SJ461A
	Q5204	DTC124EUA
	Q5201	SM6K2
	D5203	1SS355
	D5201	SML-311UT
	CAPACITORS	
	C5235	CCSRCH221J50
	C5217,C5218,C5240-C5249	CCSSCH470J50
	C5238	CEHVKW100M35
	C5201	CEHVKW101M6R3
	C5261-C5263,C5276	CKSSYB102K50
	C5216,C5233	CKSSYB103K16
	C5215	CKSSYB472K25
	C5253	CKSSYF103Z50
	C5202-C5214,C5219,C5222-C5232	CKSSYF104Z16
	C5234,C5252,C5399	CKSSYF104Z16
	C5236	DCH1165

Mark No.	Description	Part No.
RESISTORS		
	R5262,R5268	ACN1248
	R5205,R5213	RAB4CQ101J
	R5283	RS1/16S1201F
	R5282	RS1/16S4301F
	R5273	RS1/16S8201F
	Other Resistors	RS1/16S###J
OTHERS		
	CN5202 50P CONNECTOR	AKM1201
	K5201,K5202 TEST PIN	AKX9002
	X5201 CERAMIC RESONATOR	ASS1178
[CCD UCOM BLOCK]		
SEMICONDUCTORS		
	IC5603	FMS6410CS
	IC5602	PEG150A
	Q5601,Q5605	2SA1586
CAPACITORS		
	C5612,C5614	CCG1205
	C5603,C5609	CCSRCH331J50
	C5618,C5619	CCSRCH5R0C50
	C5611,C5613	CCSSCH221J50
	C5620	CCSSCK2R0C50
	C5605,C5617	CEHVKW100M16
	C5622,C5623	CKSRYB105K10
	C5606,C5607	CKSSYB102K50
	C5602,C5604	CKSSYB104K10
	C5621	CKSSYB153K16
	C5608,C5610,C5615,C5616,C5624	CKSSYF104Z16
RESISTORS		
	R5631	RAB4CQ101J
	R5633	RAB4CQ102J
	R5601-R5603,R5606-R5609	RAB4CQ473J
	R5614-R5617,R5621-R5623	RAB4CQ473J
	R5657,R5658	RAB4CQ473J
	Other Resistors	RS1/16S###J
OTHERS		
	X5601 CERAMIC RESONATOR	ASS1159
[MR VDEC BLOCK]		
SEMICONDUCTORS		
	IC6002	K4S161622H-TC60
	IC6003	UPD64015GM-UEU
COILS AND FILTERS		
	⚠F6001,F6002,F6010,F6011 EMI FILTER	CCG1162
CAPACITORS		
	C6056,C6088	ACG7046
	C6078,C6083	CCSSCH8R0D50
	C6062,C6065,C6069,C6071,C6079	CKSSYB103K16
	C6046,C6058,C6063,C6064	CKSSYB104K10
	C6066,C6067,C6070,C6072-C6077	CKSSYB104K10
	C6080-C6082,C6084,C6085	CKSSYB104K10
	C6001-C6008,C6012-C6028	CKSSYF104Z16
	C6031-C6045,C6047,C6048,C6068	CKSSYF104Z16

Mark No.	Description	Part No.
RESISTORS		
	R6010,R6068,R6072	ACN1246
	R6065,R6073	BCN1067
	R6007,R6030,R6071	RAB4CQ220J
	R6063	RS1/16SS1001D
	R6038,R6039,R6049	RS1/16SS2000F
	R6054	RS1/16SS2201D
	R6052	RS1/16SS6200D
	Other Resistors	RS1/16S###J
OTHERS		
	X6002 CRYSTAL	ASS1191
[MR ADC BLOCK]		
SEMICONDUCTORS		
	IC6201	AD9985KSTZ-110
COILS AND FILTERS		
	⚠F6201,F6204 EMI FILTER	CCG1162
CAPACITORS		
	C6205,C6209	CKSSYB104K10
	C6207,C6210,C6218	CKSSYB473K16
	C6202	CKSSYB822K16
	C6201	CKSSYB823K10
	C6203,C6204,C6206,C6208	CKSSYF104Z16
	C6211,C6212,C6215-C6217	CKSSYF104Z16
	C6222-C6224	CKSSYF104Z16
RESISTORS		
	R6213,R6218,R6223	BCN1067
	R6202	RS1/16SS2701F
	Other Resistors	RS1/16S###J
[MR HDMI BLOCK]		
SEMICONDUCTORS		
	IC6402,IC6403	BR24L02FJ-W
	IC6405	PCM1754DBQ
	IC6404	SII9021CTU
	Q6416,Q6417	2SA1586
	Q6412,Q6414	DTA124EUA
	Q6413,Q6415	DTC124EUA
	Q6402,Q6405	HN1K02FU
	Q6403,Q6404	RN1902
	D6404,D6408	1SS301
	D6403,D6407	UDZS6R8(B)
COILS AND FILTERS		
	⚠F6401 EMI FILTER	CCG1162
CAPACITORS		
	C6491 (10/6.3V)	ACG7046
	C6401,C6403,C6405,C6409,C6411	CCSSCH101J50
	C6419,C6426,C6428,C6430,C6432	CCSSCH101J50
	C6434,C6435,C6438,C6440,C6442	CCSSCH101J50
	C6444,C6446,C6448,C6449,C6454	CCSSCH101J50
	C6456,C6459,C6464,C6466,C6468	CCSSCH101J50
	C6470,C6472,C6474,C6476,C6478	CCSSCH101J50
	C6480,C6482	CCSSCH101J50
	C6462,C6463	CCSSCH120J50
	C6425,C6484	CEHVKW220M6R3

Mark No.	Description	Part No.
	C6402,C6404,C6406,C6408,C6410	CKSSYF104Z16
	C6412,C6414,C6416,C6418	CKSSYF104Z16
	C6420-C6424,C6427,C6429,C6431	CKSSYF104Z16
	C6433,C6436,C6437,C6439,C6441	CKSSYF104Z16
	C6443,C6445,C6447,C6450-C6453	CKSSYF104Z16
	C6455,C6457,C6458,C6460,C6461	CKSSYF104Z16
	C6465,C6467,C6469,C6471,C6473	CKSSYF104Z16
	C6475,C6477,C6479,C6481,C6483	CKSSYF104Z16
	C6490	CKSSYF104Z16
	RESISTORS	
	R6418,R6419,R6421	ACN1251
	R6414	RAB4CQ100J
	R6465	RAB4CQ103J
	R6438	RAB4CQ470J
	R6416	RAB4CQ680J
	Other Resistors	RS1/16S###J
	OTHERS	
	JA6401,JA6402 HDMI CONNECTOR	AKP1278
	X6401 CRYSTAL	ASS1192
	[MR DSEL BLOCK] SEMICONDUCTORS	
	IC6601	PD6523A
	IC6602	TC74LCX125FT
	COILS AND FILTERS	
	⚠F6604 CHIP BEAD FILTER	ATX1058
	⚠F6601-F6603 EMI FILTER	CCG1162
	CAPACITORS	
	C6632 (10/6.3V)	ACG7046
	C6604	CCSRCH221J50
	C6631	CKSSYB102K50
	C6601-C6603,C6607-C6610	CKSSYF104Z16
	C6613-C6617,C6619,C6621-C6623	CKSSYF104Z16
	C6625-C6627,C6629,C6630	CKSSYF104Z16
	RESISTORS	
	R6603-R6605	ACN1251
	R6611,R6614,R6618	BCN1071
	R6613,R6620	RAB4CQ101J
	Other Resistors	RS1/16S###J
	OTHERS	
	X6601 CRYSTAL	ASS1194
	[MR IP BLOCK] SEMICONDUCTORS	
	IC6801,IC6802	K4S643232H-TC60
	IC6803	PE5504B
	COILS AND FILTERS	
	⚠L6801-L6804 CHIP BEAD FILTER	BTX1042
	CAPACITORS	
	C6801 (10/6.3V)	ACG7046
	C6863	CKSSYB102K50
	C6802,C6804,C6807-C6809,C6813	CKSSYF104Z16
	C6815-C6817,C6821,C6824-C6828	CKSSYF104Z16
	C6830,C6831,C6834,C6835	CKSSYF104Z16
	C6839-C6862	CKSSYF104Z16
	RESISTORS	
	R6833,R6838	ACN1246
	R6841,R6844-R6847	ACN1251
	R6813,R6814,R6816,R6820,R6821	BCN1067
	R6823,R6825,R6827,R6828	BCN1067
	R6818	BCN1071
	R6832	RAB4CQ101J
	R6817	RAB4CQ470J
	Other Resistors	RS1/16S###J
	[MR MULTI BLOCK] SEMICONDUCTORS	
	IC7002	MBM29DL162TE70TN
	IC7001	PEG121B
	IC7004	TC74VHC08FTS1
	COILS AND FILTERS	
	⚠F7001-F7006 EMI FILTER	CCG1162
	CAPACITORS	
	C7052	CKSSYB102K50
	C7006,C7008,C7010-C7017,C7019	CKSSYF104Z16
	C7021,C7023,C7024,C7026-C7029	CKSSYF104Z16
	C7032-C7034,C7036,C7037	CKSSYF104Z16
	C7039-C7042,C7044,C7046-C7048	CKSSYF104Z16
	C7050	CKSSYF104Z16
	RESISTORS	
	R7011,R7013,R7024,R7032,R7036	ACN1246
	R7062-R7064	ACN1251
	R7015,R7023	RAB4CQ101J
	R7016,R7018,R7070	RAB4CQ103J
	R7060	RAB4CQ680J
	Other Resistors	RS1/16S###J
	[MR IF BLOCK] SEMICONDUCTORS	
	IC7202	SII170BCLG64
	IC7201,IC7203	TC74VHC08FTS1
	Q7206	2SA1586
	Q7203,Q7207,Q7210	DTA124EUA
	Q7211	DTC124EUA
	Q7209	HN1C01FU
	Q7201	RN1902
	D7202-D7206	1SS355
	COILS AND FILTERS	
	⚠F7204-F7207 EMI FILTER	ATF1209
	⚠L7201 CHIP FERRITE BEAD	BTX1042
	⚠F7201-F7203,F7208 EMI FILTER	CCG1162
	CAPACITORS	
	C7203,C7207,C7208 (10/6.3V)	ACG7046
	C7226,C7227	CCSSCH100D50
	C7201,C7204,C7211,C7213,C7214	CCSSCH101J50
	C7216,C7217,C7219,C7221	CCSSCH101J50
	C7223	CKSSYB102K50
	C7209,C7215,C7220,C7225,C7228	CKSSYB471K50
	C7202,C7205,C7206,C7210,C7212	CKSSYF104Z16
	C7218,C7224	CKSSYF104Z16

Mark No.	Description	Part No.
RESISTORS		
R7215		RAB4CQ101J
R7216		RS1/16S5100F
Other Resistors		RS1/16S###J
OTHERS		
CN7201	SOCKET (20P)	AKP1226
CN7202	DVI SOCKET (24P)	AKP1250

[MR RGB SW BLOCK]

SEMICONDUCTORS		
IC4701		NJM12904V
IC4702		R2S11001FT
IC4703		TC7WH123FU
Q4706-Q4709		2SA1586
Q4703		2SC4116
Q4704		2SC5233
Q4701		DTA124EUA
Q4702		DTC124EUA
Q4705		HN1A01FU
D4701,D4708		1SS301
CAPACITORS		
C4737,C4741,C4755 (10/6.3V)		ACG7046
C4702		CCSRCH331J50
C4725,C4727		CCSRCH680J50
C4728		CEHVKW101M6R3
C4705		CEHVKW220M16
C4711-C4716,C4723,C4729-C4731		CKSRYB105K10
C4734,C4738,C4739,C4743,C4754		CKSRYB105K10
C4706		CKSRYB224K10
C4703		CKSRYB473K16
C4717-C4721,C4724,C4726,C4732		CKSSYB103K16
C4735,C4736,C4742,C4750-C4753		CKSSYB103K16
C4707-C4710,C4740,C4744,C4745		CKSSYF104Z16
C4749		CKSSYF104Z16
C4701,C4704		DCH1165
RESISTORS		
R4756		RS1/16S1800F
R4746		RS1/16S5600F
R4728-R4730,R4748-R4750		RS1/16S75R0F
Other Resistors		RS1/16S###J
OTHERS		
JA4701	PIN JACK (9P)	AKB1329

LED ASSY

SEMICONDUCTORS		
Q8003		DTA124EUA
Q8004		DTC124EUA
Q8002		RN2902
D8001		SML-311DT
D8003		SML-311UT
D8004		SML310BA1T
SWITCHES AND RELAYS		
S8001-S8007		ASG1088
CAPACITORS		
C8005,C8006		CCSRCH101J50
C8001,C8007		CKSSYF104Z16

Mark No.	Description	Part No.
RESISTORS		
All Resistors		RS1/16S###J
OTHERS		
CN8001	CONNECTOR	CKS3826

FRONT ASSY

SEMICONDUCTORS		
IC7801		BR24C21FJ
IC7802		TC74VHC08FTS1
Q7801-Q7803,Q7806-Q7808		2SC4116
Q7804,Q7805		DTC124EUA
D7813		1SS301
D7805-D7807,D7816-D7818		1SS302
D7801-D7803		UDZS5R1(B)
D7811,D7812,D7814,D7815		UDZS5R6(B)
D7804,D7808		UDZS9R1(B)
CAPACITORS		
C7821,C7827 (10/6.3V)		ACG7046
C7829,C7830 (10/6.3V)		ACG7046
C7822,C7823		CCSRCH220J50
C7841,C7844,C7846		CEHVKW100M16
C7803,C7804		CKSRYB103K50
C7805,C7808,C7809,C7813		CKSRYB105K10
C7831,C7832,C7834,C7839,C7842		CKSRYB105K10
C7845		CKSRYB105K10
C7801		CKSRYB473K16
C7802,C7820,C7824,C7840,C7843		CKSSYF104Z16
C7847,C7848		CKSSYF104Z16
C7819,C7835,C7849		DCH1165
RESISTORS		
R7801,R7803,R7809,R7823-R7825		RS1/16S75R0F
R7857-R7859		RS1/16S75R0F
Other Resistors		RS1/16S###J
OTHERS		
JA7803	PIN JACK (3P)	AKB1303
JA7805	PIN JACK (3P)	AKB1305
CN7803	12P FFC CONNECTOR	AKM1233
CN7804	50P CONNECTOR	AKM1236
CN7806	15P D-SUB SOCKET	AKP1214
JA7801	4P MINI DIN SOCKET (S)	AKP1238

POWER SUPPLY UNIT

POWER SUPPLY Unit has no service part.

6. ADJUSTMENT

1. At shipment, the unit is adjusted to its best conditions. Normally, it is not necessary to readjust even if an assembly is replaced. Replacement of individual components on the circuitboard can cause malfunction and/or failure. If replacement is necessary, the assembly must be replaced.
2. Use a stable AC power supply.

6.1 POSSIBLE CASES WHERE READJUSTMENT IS REQUIRED

■ When any of the following assemblies is replaced

POWER SUPPLY Unit	➡	No adjustment required
MR MAIN Assy	➡	No adjustment required
MR DTB Assy	➡	No adjustment required However, HOST ID is changed. Please tell a customer about new HOST ID. Refer to the following note and instruction manual.
PC Card Unit	➡	No adjustment required
Other assemblies	➡	No adjustment required

■ When any part in the following assemblies is replaced

POWER SUPPLY Unit	➡	The assembly must be replaced as a unit, and no part replacement is allowed.
MR MAIN Assy	➡	Replacement of components IC4801, IC5202, IC5207, IC6003 and IC6201 on the circuitboard can cause malfunction and/or failure. If replacement is necessary, the assembly must be replaced.
MR DTB Assy	➡	The assembly must be replaced as a unit, and no part replacement is allowed.
PC Card Unit	➡	The assembly must be replaced as a unit, and no part replacement is allowed.
Other assemblies	➡	No adjustment required

■ Adjustment items

① Audio Level Adjustment
② Audio Level Adjustment
③ MSP Adjustment
④ MSP Adjustment

Note: Checking the Cable Card ID

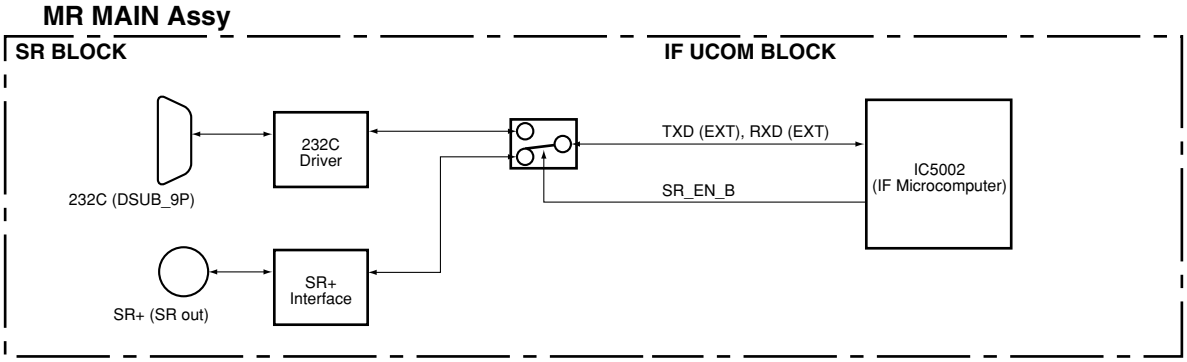
The Media Receiver has a slot for a cable card that is used for managing your information by the cable TV company. The following procedure allows you to check your Cable Card ID and the Host ID.

1. Press HOME MENU.
2. Select “Tuner Setup”. (↑/↓ then ENTER)
3. Select “Channel Setup”. (←/→ then ENTER)
4. Select “POD ID”. (↑/↓)
   • The Host ID and Cable Card ID appear.
5. Press HOME MENU to exit the menu.

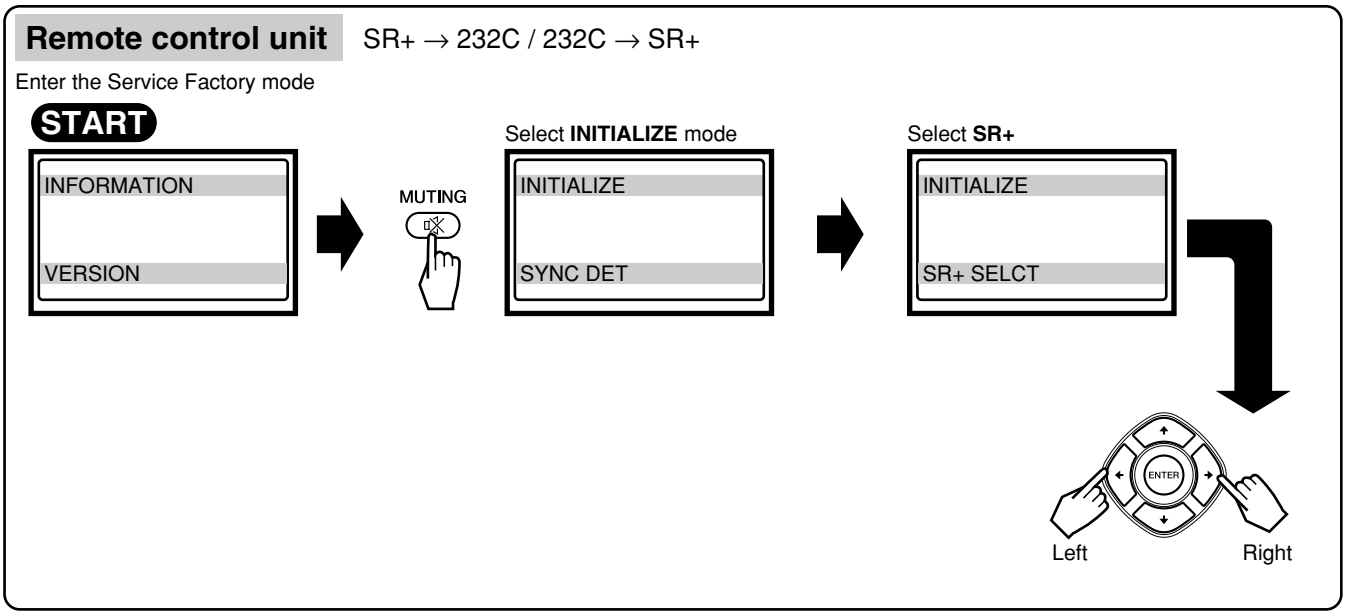
6.2 USING RS-232C COMMANDS

For the PDP-4360HD and PDP-5060HD series Plasma Displays, the circuitry is structured as shown in the diagram below to support the SR+ system. Controlling with either the SR+ system or RS-232C commands can be selected. As the SR+ system is selected at shipment, to control with RS-232C commands in servicing it is necessary to switch the paths. After servicing, be sure to return the setting to the SR+ system.

● Rough diagram of switching between SR+ and RS-232C



● How to switch from SR+ to RS-232C

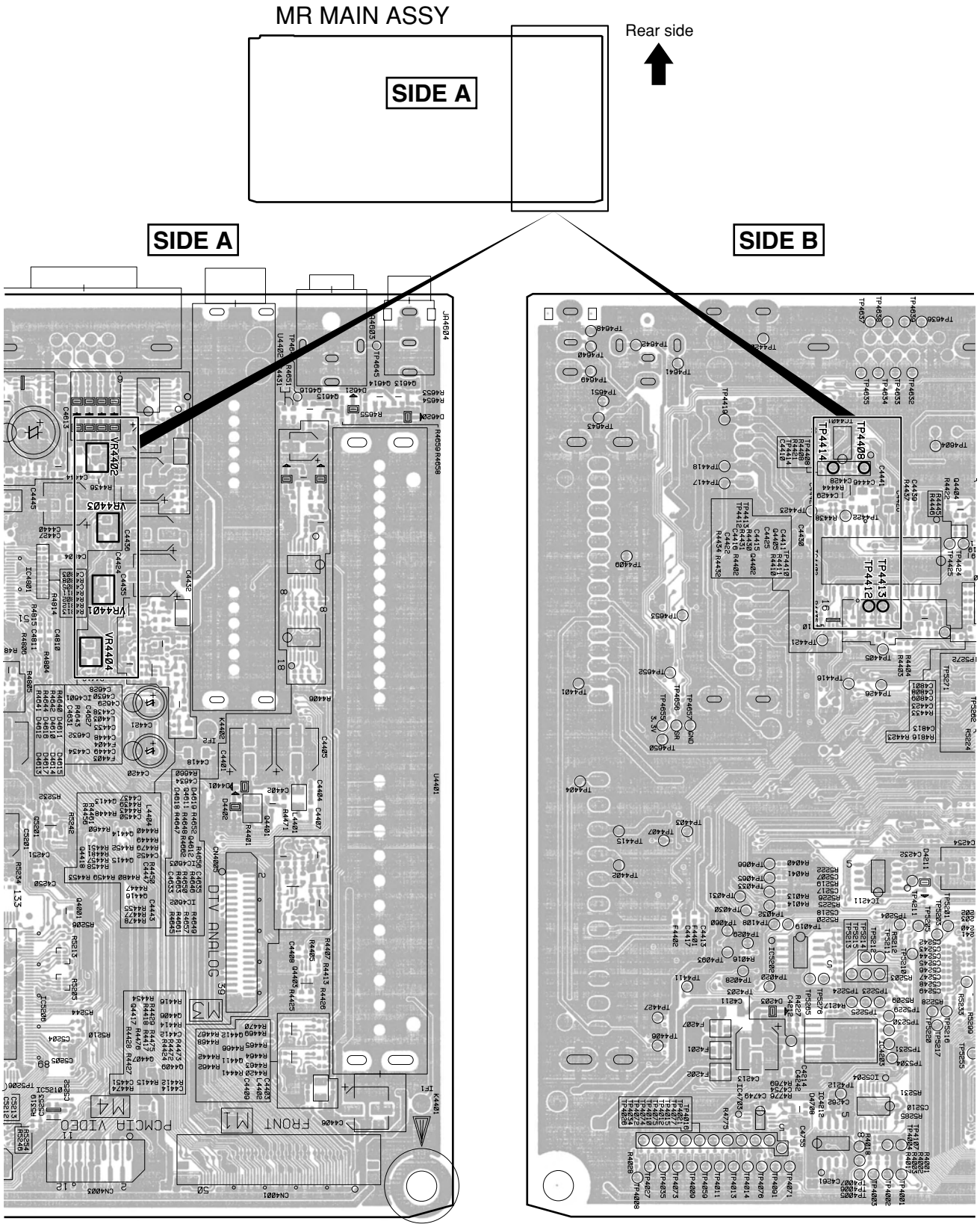


Tips: How to change the SR+/RS-232C setting without entering Service Factory mode
Hold the **VOLUME** ◿+ or ◿– key on the remote control unit pressed for 3-10 seconds during Standby mode.
Then within 3 seconds after the key is released, hold the **2-screen** ◑ key on the remote control unit pressed for 3-10 seconds.
Then within 3 seconds after the key is released, use the **SET** key on the remote control unit to set to RS-232C (the baud rate last selected is chosen) or the **HOME MENU** key to set to SR+.

6.3 ADJUSTMENT ITEMS

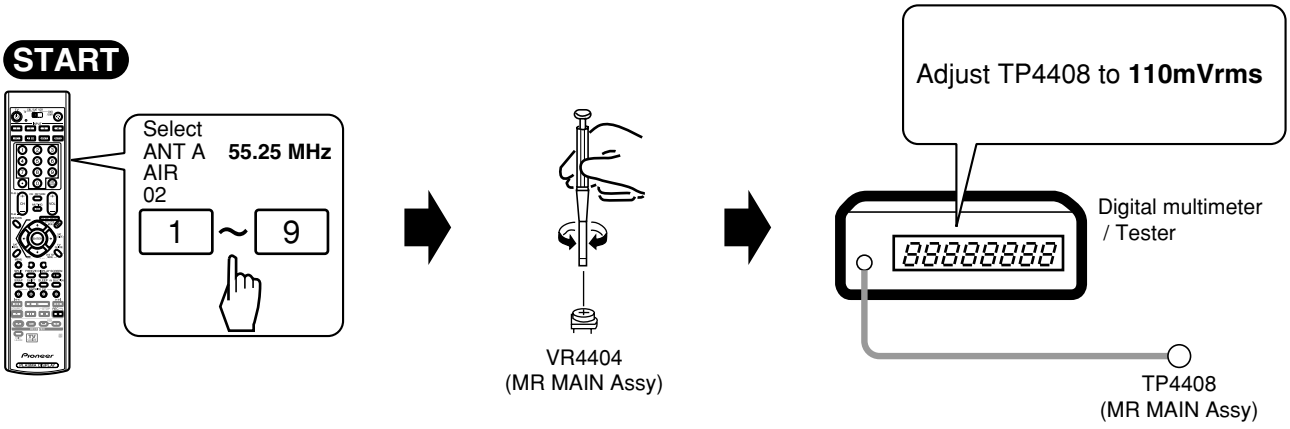
If readjustment is necessary because of adjustment error at shipment, perform adjustments as shown below.

● **Adjustment Points**



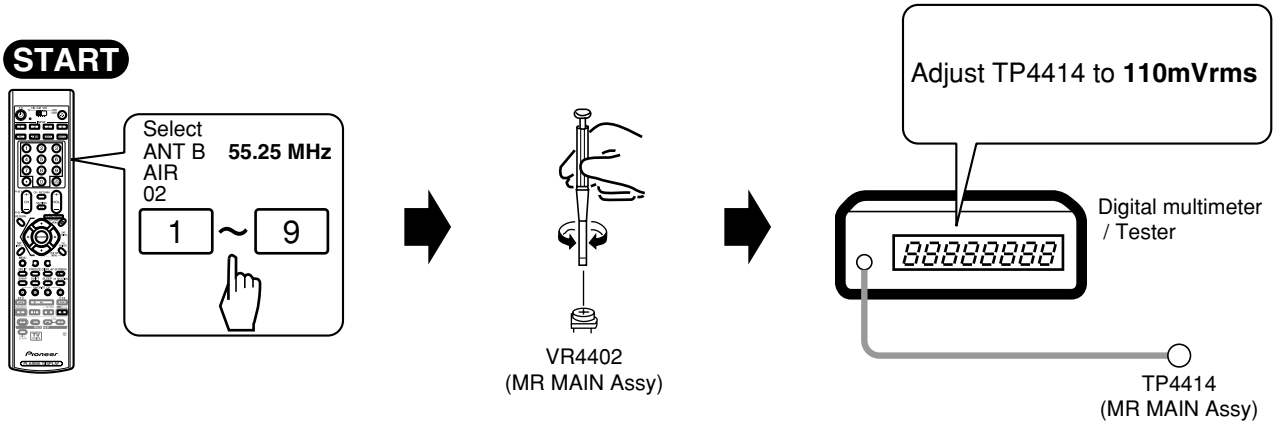
① Audio Level Adjustment

Equipment : SG, Digital mutimeter / Tester
Condition : Input RF level 75dBμV
1kHz MONO 100%



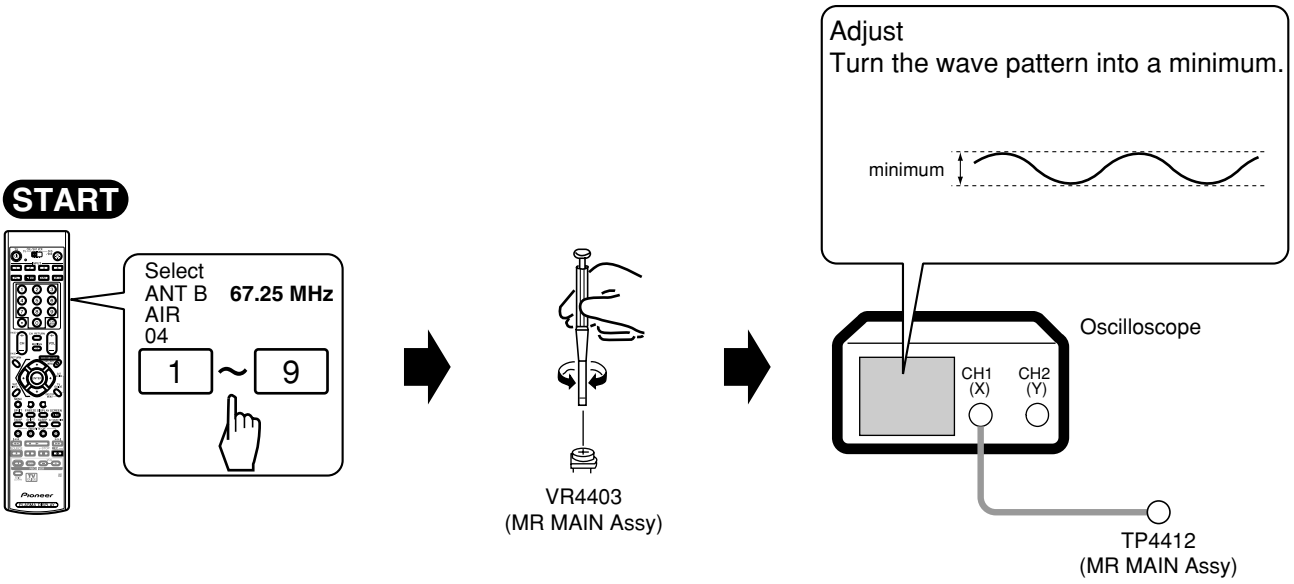
② Audio Level Adjustment

Equipment : SG, Digital mutimeter / Tester
Condition : Input RF level 75dBμV
1kHz MONO 100%



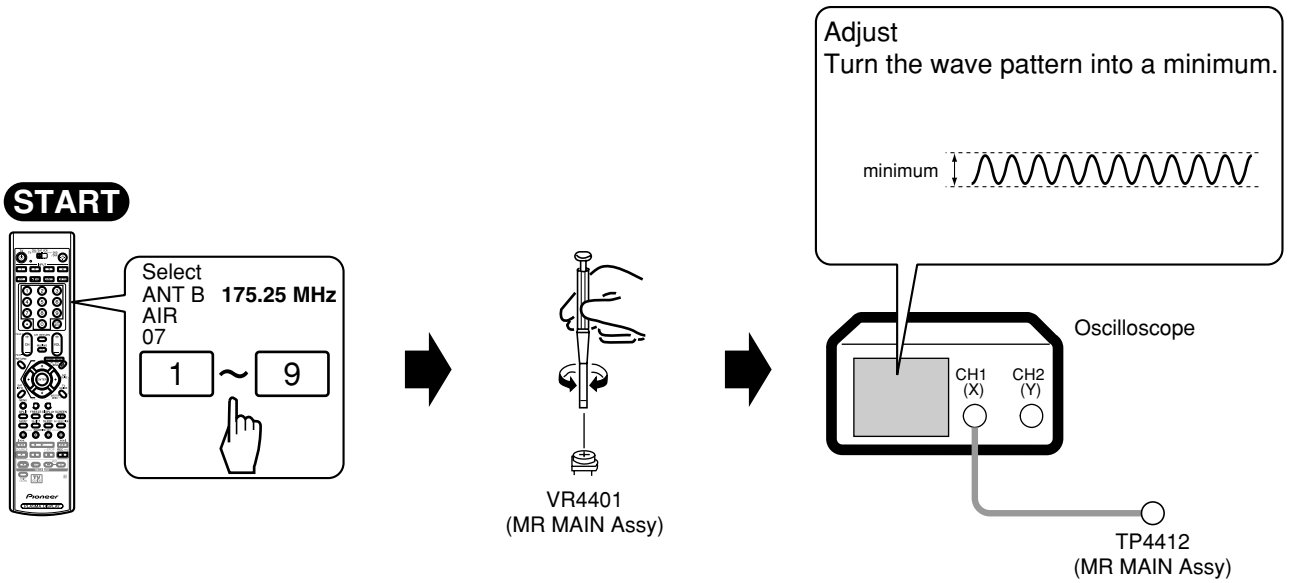
③ MSP Adjustment

Equipment : SG, Digital mutimeter / Tester
Condition : Input RF level 75dBμV
300Hz STEREO 100% Lch Only



④ MSP Adjustment

Equipment : SG
Condition : Input RF level 75dBμV
5kHz STEREO 100% Lch Only

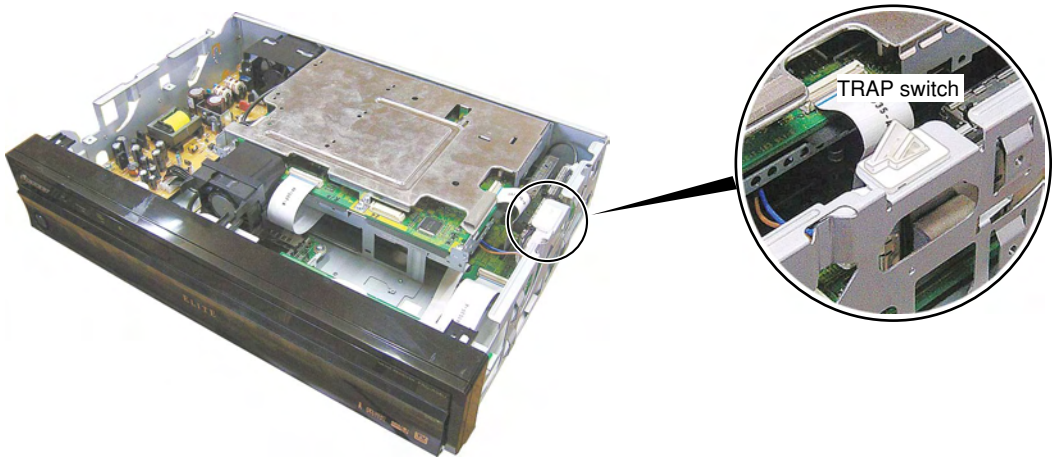


6.4 TRAP SWITCH

● Outline and Notes

For video data transmission from the Media Receiver to the PDP-436U and PDP-506U-series Plasma Displays, digital signals are used. Therefore, this unit adopts the HDCP (High-bandwidth Digital Content Protection) system for copyright protection. This unit is also provided with a detection switch (TRAP switch) that will prohibit the unit from being turned on again "if the upper plate of the unit is accidentally opened," in order to prevent the panel technology from being leaked out.

The TRAP switch is disabled while the unit is turned off.
When performing internal diagnosis of the PDP, fix the switch to the OFF position using adhesive tape before turning on the unit. After servicing, be sure to remove the adhesive tape.



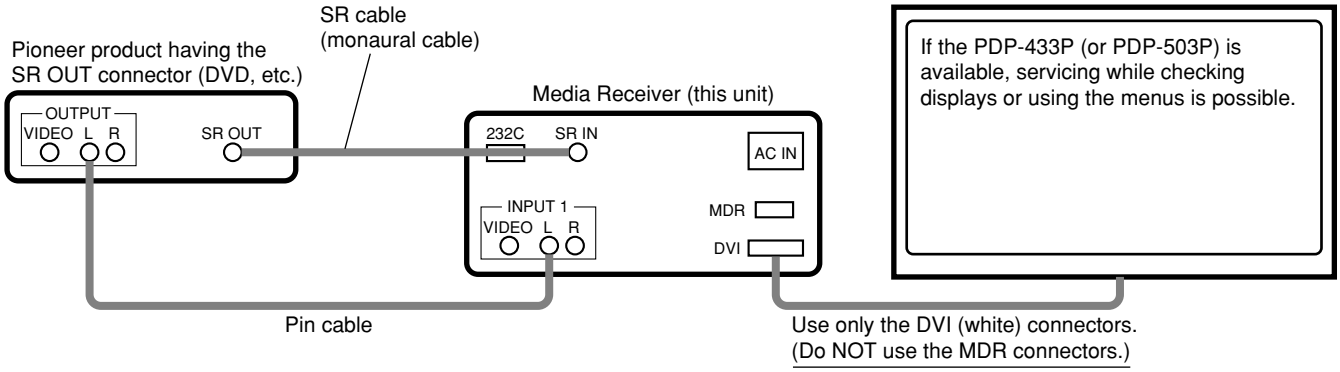
6.5 SERVICING USING ONLY THE MEDIA RECEIVER

For servicing of the PDP-436HD and PDP-506HD-series Plasma Display using only the Media Receiver, the following two methods can be used:

● Remote controlling using SR connections

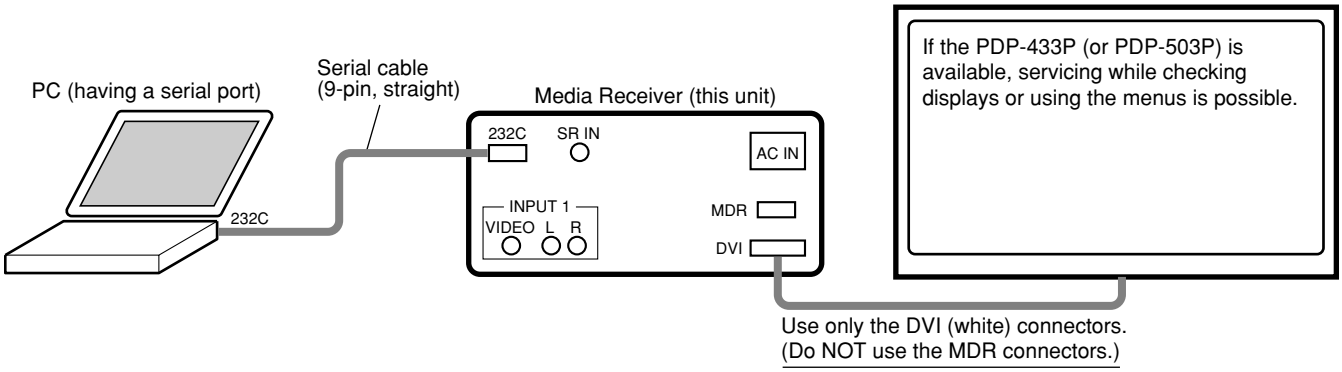
About connections

- Connect the SR OUT connector of a Pioneer product having that connector (a DVD in the following example) and the SR IN connector of the Media Receiver, using the SR cable. As the remote control sensor is not provided with the Media Receiver, this connection is required for using the remote control unit if the panel is not available. In this case, aim the remote control unit at the remote control sensor of the device (DVD in this case).
- Connect either the audio or the video output of the device (DVD in the example) and the corresponding audio or video input of the Media Receiver, using a cable with phono plugs. This connection is required in order to use ground in common with the SR cable, because with the SR cable connection the ground connection for signal reference is not available. In the example, the audio L channel is used, but the audio R channel or video can be used instead.
- If the plasma display for a previous model, such as the PDP-435P or PDP-505P, is available, servicing while checking displays or using the menus is possible. For this, connect only the DVI connectors (white) of the Media Receiver and the plasma display. The MDR connector of the Media Receiver must not be used, even though it has the same shape and number of pins, because signals assigned to the connectors



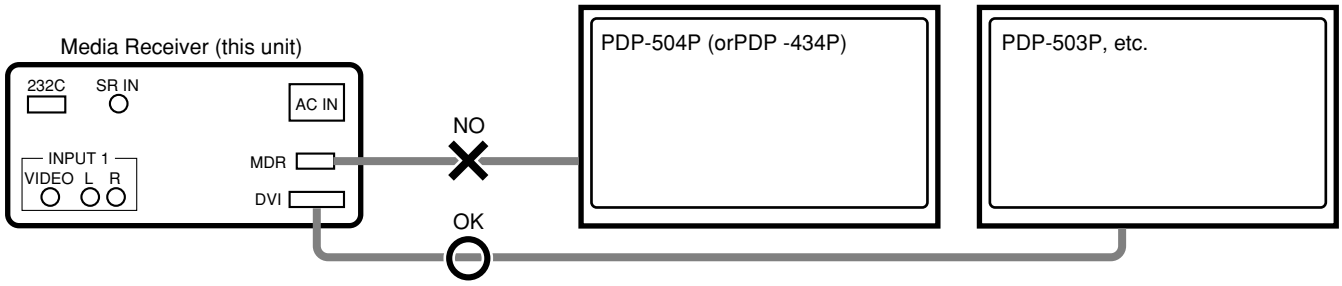
● RS-232C control using a PC

In this case the setting is RS-232C 38400bps, and the setting of "6.2. USING RS-232C COMMANDS" is not related.
Please set baud rate of PC in 38400bps.
For connection with the PC, use a straight cable.



● Note on connection

If the MDR connector of the PDP-436HD or PDP-506HD-series is used, it is considered that the PDP-436P (or PDP-506P) is connected, and the Media Receiver operates on such precondition, **which may result in a failure of the Media Receiver. Be sure not to connect to the MDR connector.** (Do NOT use the MDR connector when servicing the Media Receiver alone.)



6.6 SERVICE FACTORY MODE

To operate in Service Factory mode, use the supplied remote control unit.

How to enter Service Factory Mode

While in Standby mode, follow the below procedures with the remote control to enter Service Factoy mode.

1. Press the [DISPLAY] key.
2. 3 second counter will start.
3. After 3 seconds, press [LEFT] key.
   (If no operation is done within 10 seconds, the Service Factory routine is cleared, and the standby mode is returned)
4. 5 Second counter will start.
5. Before 5 second counter ends, press [UP] key.
6. Before 5 second counter ends, press [LEFT] key.
7. Before 5 second counter ends, press [RIGHT] key.
8. Before 5 second counter ends, press [POWER] key.
9. If the prodcedure is correct with the given time, the Service Factory mode is up and ready.

* During step 3 to 8, if other operations took place, the Service Factory routine is cleared.
* If the counter's time is up, normal standby mode is returned.
* If TV Guide On Screen's "Auto Guide" is "on", set this setting to "off" before starting the procedure. If this setting is left "on", Service Factory mode will not be on.

Operation in Service Factory mode

● Functions whose settings are set to OFF

The settings for the following functions are set to OFF when Service Factory mode is entered (including when the "FAY" command is received):

- Two-screen operations (input function set on the main side is selected)
- P ZOOM
- STILL
- Detection of the TRAP switch (The log in the EEPROM is retained.)

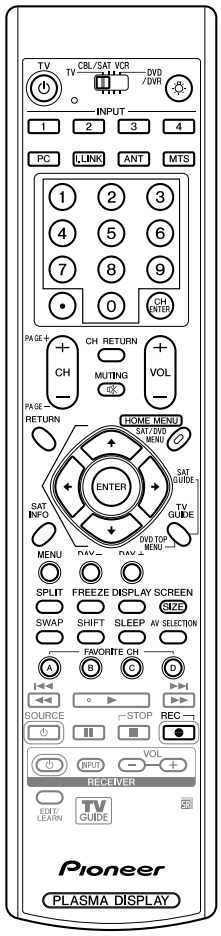
● User data

User data will be treated as follows:

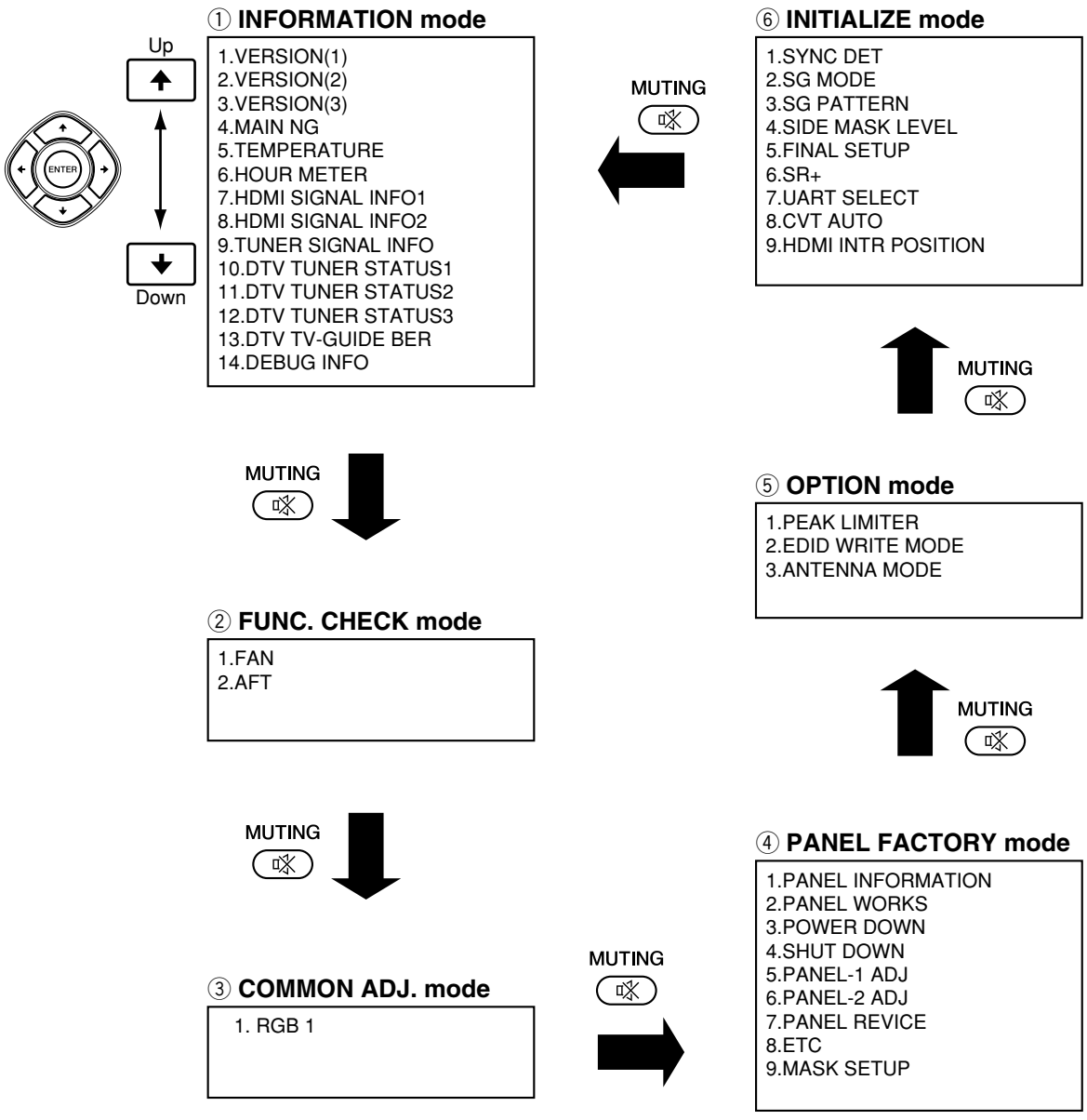
- User data on picture- and audio-quality adjustments are not reflected, and factory-preset data are output (user data will be retained in memory). When the unit enters Factory mode, the current audio-quality adjustment data will still be retained in memory.
- As to data on various settings, user data will be applied to the items that are associated with signal format change (screen-ize switching, etc.).
- Data on screen (i.e., screen position; meaning clock dividers, and not including data on screen size) are reset to the default values (data stored in memory will be retained). Screen size will be retained.

Remote control codes in Service Factory mode

SR Function	Main Function	Remarks
Muting	Switching the main items	Shifting to the next main item (top)
DOWN	Switching the subtitled items	Shifting downward to the next subtitled item
UP	Switching the subtitled items	Shifting upward to the next upper layer
RIGHT	Decreasing the adjustment value	Decreasing the adjustment value
LEFT	Increasing the adjustment value	Increasing the adjustment value
SET	Switching layers	Shifting downward or upward to the next lower or upper layer
INPUT	Selecting input	Shifting the input to the next function
INPUTxx	Selecting input	Switching the input to xx
CH+	Increasing the channel number	Advancing a preset channel (effective when Function is set to TV)
CH-	Decreasing the channel number	Turning a preset channel backward (effective when Function is set to TV)
Numeric keys	Function: TV	Function: TV (previously selected channel number is selected)
POWER	Power OFF	Turning the power off
FACTORY	Factory OFF	Turning Service Factory mode off
MENU	Menu ON	Turning Service Factory mode off and Menu mode on

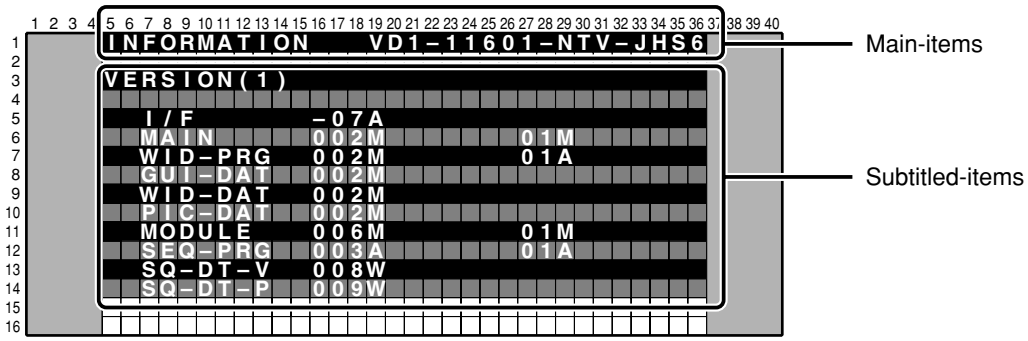


Changes of the Service Factory menus



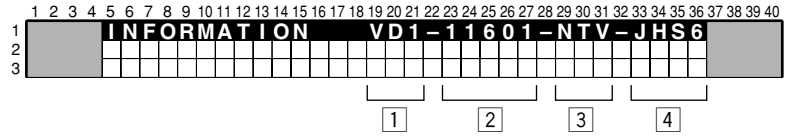
Note: Details of the Panel Factory Mode, refer to the Panel's service manual.

Indications in Service Factory mode



Main-item indications

Four parameters are displayed:



1 Input function

Input Functions	On-Screen Display
VIDEO 1- 4	VD 1 - 4
Terrestrial Wave A	ARA
Terrestrial Wave B	ARB
Cable A	CBA
Cable B	CBB
PC	PC
PC Card	PCC

2 SIG mode and screen size

Note: See SIG-Mode Tables. (See next page.)

3 Color system and signal type

Color System and Signal Type		On-Screen Display
NTSC	Composite input	NTV
	S-connector input	NTS
Y / CB / CR		CBR
Y / PB / PR		PBR
RGB		RGB
Digital video signal		DIG

4 Option (Destination, Panel Generation, etc.)

Options	On-Screen Display
HD system in North America (Regular)	ATS6
HD system in North America (ELITE)	AHS6

● SIG-Mode and Screen Size (by User is displayed)

1st and 2nd charecters : SIG-Mode (resolution)
3rd and 4th charecters : SIG-Mode (refresh rate)
5th charecter : Setting of the screen size that user configured.

SIG-Mode table for video signals (resolutions and V frequencies)

1st - 4th Character		Signal Type	Vertical Frequency Fv (Hz)	Horizontal Frequency Fh (kHz)
10	60	SDTV*525i	60.000	15.750
20	60	SDTV*525p	60.000	31.500
30	60	HDTV*1125i	60.000	33.750
40	60	HDTV*750p	60.000	45.000

SIG-Mode table for PC signals (resolutions and V frequencies)

1st - 4th Character		Signal Type	Vertical Frequency Fv (Hz)	Horizontal Frequency Fh (kHz)
C1	70	720x400	70.087	31.469
C2	60	640x480	59.940	31.469
	72		72.809	37.861
	75		75.000	37.500
C4	56	800x600	56.250	35.1556
	60		60.317	37.879
	72		72.188	48.077
	75		75.000	46.875
C7	60	1024x768	60.004	48.363
	70		70.069	56.476
	75		75.029	60.023
C8	56	1280x768	56.250	45.113
	60		59.833	47.986
	70		70.000	56.137

Selection of the screen size by the user is displayed.

5th Character	GUI Notation	VIDEO	PC	Remarks
0	DOT BY DOT	–	●	
1	4:3	●	●	
2	FULL(FULL1)	●	●	
3	ZOOM	●	–	
4	CINEMA	●	–	
5	WIDE	●	–	
8	FULL2	●	●	

●: supported, –: unsupported

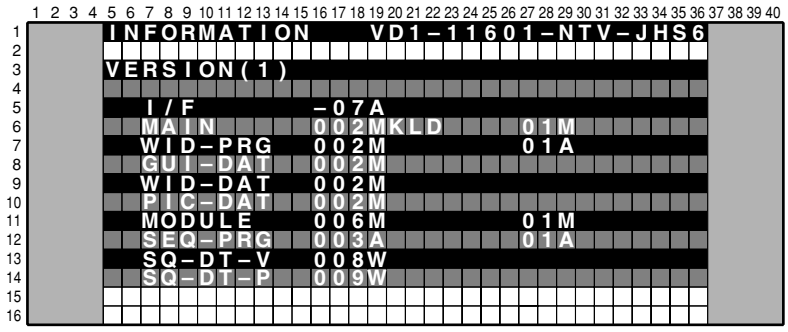
■ Service Factory Menus

① INFORMATION mode

● Operation items

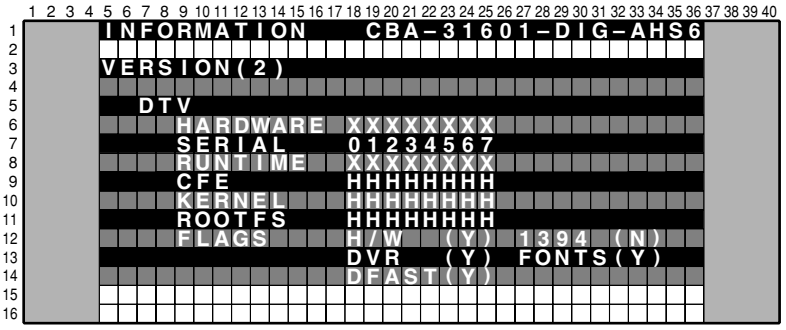
No.	Function / Display	Context	RS-232C
1	VERSION (1)	The flash memory versions for each device are displayed. (common part)	QS1
2	VERSION (2)	The flash memory versions for each device are displayed. (individual part)	QS6
3	VERSION (3)	The flash memory versions for each device are displayed. (individual part)	QS6
4	MAIN NG	The shutdown generated on Media Receiver side and its time of occurrence are displayed.	QNG
5	TEMPERATURE	The information of temperature and fan status on Media Receiver side is displayed.	QMT
6	HOUR METER	The Cumulative power-on time to the Media Receiver is displayed.	–
7	HDMI SIGNAL INFO 1	The file information of HDMI series are displayed.	–
8	HDMI SIGNAL INFO 2	The file information of HDMI series are displayed.	–
9	TUNER SIGNAL INFO	The signal information on TUNER is displayed.	–
10	DTV TUNING STATUS 1	Digital broadcast information and status is displayed upon receiving digital broadcast signal.	–
11	DTV TUNING STATUS 2	Digital broadcast information and status is displayed upon receiving digital broadcast signal.	–
12	DTV TUNING STATUS 3	Digital broadcast information and status is displayed upon receiving digital broadcast signal.	–
13	DTV TV-GUIDE BER	TV-Guide Bit Error Rate Information.	–
14	DEBUG INFO	Debug Information.	–

1. VERSION (1)



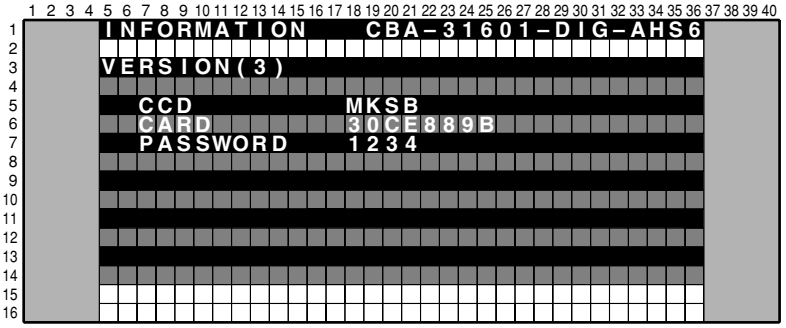
Flash memory on Device	On-Screen Display
IF microcomputer	I/F
Main microcomputer	MAIN
Program for CARRERA-MANTA	WID-PRG
GUI data for CARRERA-MANTA	GUI-DAT
Enhanced data for CARRERA-MANTA.	WID-DAT
Picture Quality data for CARRERA-MANTA	PIC-DAT
Module microcomputer (for the PDP)	MODULE
Program for ASTRA-MANTA (for the PDP)	SEQ-PRG
Sequence data for ASTRA-MANTA Video	SQ-DT-V
Sequence data for ASTRA-MANTA PC	SQ-DT-P

2. VERSION (2)



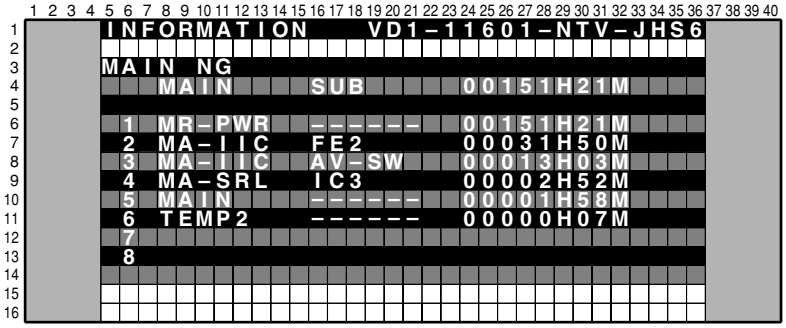
Flash Device	On - Screen Display	Version Display	Elite	Regular
DTV Hardware Version	HARDWARE	8 character	O	O
DTV Hardware Serial	SERIAL	8 character	O	O
DTV Runtime Version	RUNTIME	8 character	O	O
CFE Version	CFE	8 character	O	O
KERNEL Version	KERNEL	8 character	O	O
ROOTFS Version	ROOTFS	8 character	O	O
FLAGS	FLAGS	5 character	O	O

3. VERSION (3)



Flash Device	On - Screen Display	Version Display	Elite	Regular
CCD-UCOM Version	CCD	4 character	O	O
CARD Version	CARD	8 character	O	×
User Password	PASSWORD	4 character	O	O

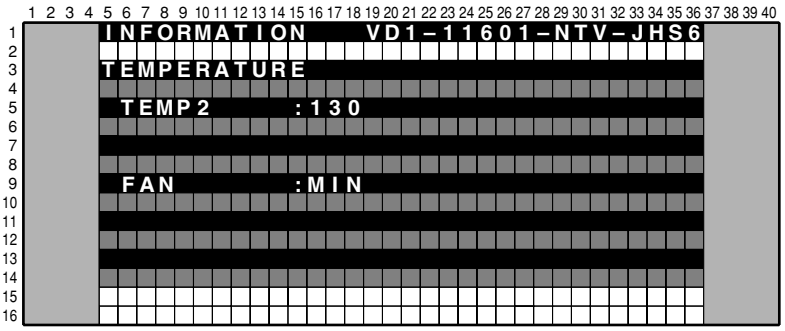
4. MAIN NG



● Media Receiver NG information

OSD: MAIN	OSD: SUB	Cause of Shutdown
MODULE	----	Failure of communication to Module microcomputer
MA-SRL		3-wire Serial Communication of Main microcomputer.
	IF	Communication failure of IF microcomputer
	MULTI1	MANTA communication failure (MULIT1)
	I/P	MANTA communication failure (I/P)
	D-SEL	MANTA communication failure (D-SEL)
MA-IIC		IIC communication failure of Main microcomputer
	FE1	Analog Tuner 1 (Front End 1)
	FE2	Analog Tuner 2 (Front End 2)
	MPX	MPX
	AV-SW	AV Switch
	RGB-SW	RGB Switch
	CCD	CCD
	GCR	GCR
	M-VDEC	Main VDEC
	ADC	AD/PLL
	HDMI	HDMI
	PLK-T	TMDS Tx
	PLK-R	TMDS Rx
	MA-EEP	64k EEPROM
MAIN		Communication failure of Main microcomputer and Unknown Error
FAN		Fan stopped
TEMP2		Abnormally high temperature at MR.
DTUNER		Failure of Digital Tuner
	PS/RST	Failure to DTB Starting
	DEVICE	DTB Device Error
	TV-G	TV-Guide Error
M-DCDC		Abnormally in RST2 of MR (power decrease of DC-DC converter)
HOME-G		Failure at Home Gallery
	CD-COM	Failure of PC Card Communication
	CD-DEV	Failure of PC Card
	CD-RST	PC Card Reset NG

5. TEMPERATURE

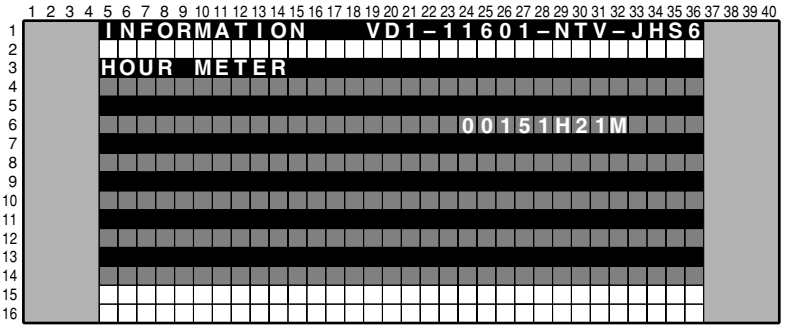


Displays the temperature and FAN speed of the Media Receiver.

TEMP2 : Displays the value from 000 to 255 of the readout data from the Media Receiver's built-in heat sensor.

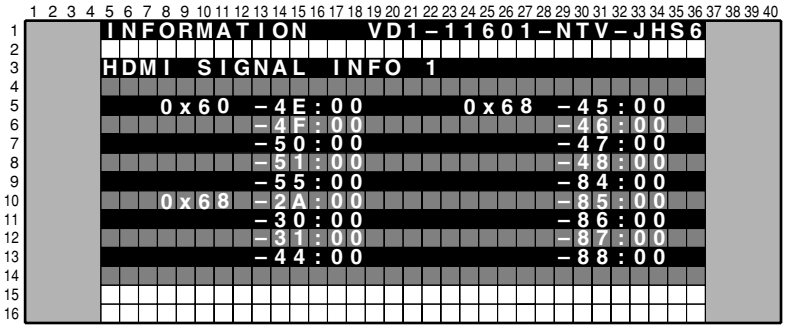
FAN : The value of the Fan output is displayed.
Either STOP, MIN, MAX is displayed.
STOP: FAN stop, MIN: FAN Speed Low, MAX: FAN Speed High

6. HOUR METER



- Displays the total time of power that the Media Receiver has been turned ON.
- Main microcomputer's memory timing is every one hour while the power is turned ON, when power is turned OFF, when PD/SD occurs.

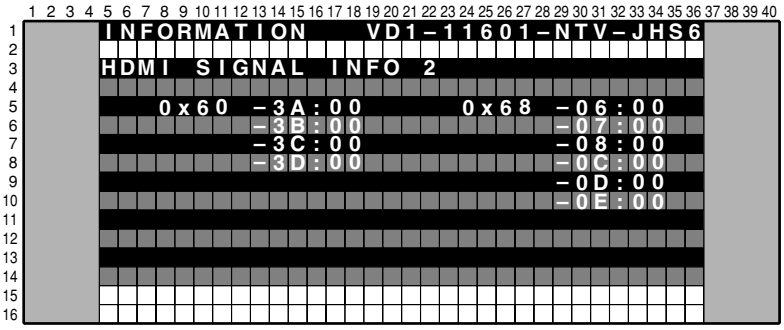
7. HDMI SIGNAL INFO 1



● **Displays the input signal information of HDMI terminal**

HDMI SIGNAL INFO 1		
SA		**Context**
0x60	- 4E:	Video information: valid horizontal pixel numbers (low order bit)
	- 4F:	Video information: valid horizontal pixel numbers (high order bit)
	- 50:	Video information: valid vertical line numbers (low order bit)
	- 51:	Video information: valid vertical line numbers (high order bit)
	- 55:	Video information: interlace/non-interlace, sink polarity
0x68	- 2A:	Audio information: PCM/non PCM, copyright protected or not
	- 30:	Audio information: sampling frequency
	- 31:	Audio information: sampling bit rate
	- 44:	Audio information: color space
	- 45:	Video information: aspect ratio
	- 46:	Video information: scaling
	- 47:	Video information: video format
	- 48:	Video information: pixel count
	- 84:	Audio information: channel count
	- 85:	Audio information: not used (zero at all times)
	- 86:	Audio infromation: not used (zero at all times)
	- 87:	Audio information: speaker allocation
	- 88:	Audio information (down mix prohibit flag

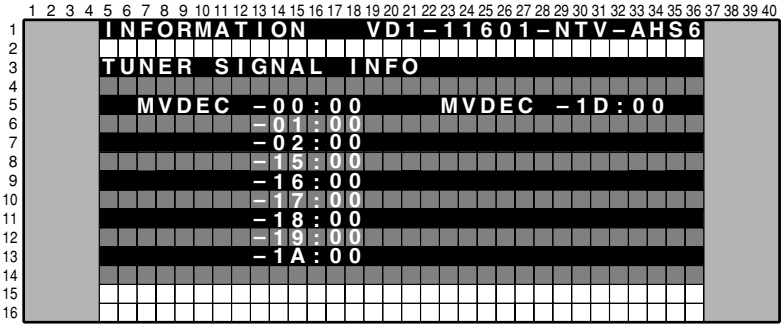
8. HDMI SIGNAL INFO 2



● **Displays the input signal information of HDMI terminal**

HDMI SIGNAL INFO 2		
SA		**Context**
0x60	- 3A:	Video information: valid horizontal pixel numbers (low order bit)
	- 3B:	Video information: valid horizontal pixel numbers (high order bit)
	- 3C:	Video information: valid vertical line numbers (low order bit)
	- 3D:	Video information: valid vertical line numbers (high order bit)
0x68	- 06:	Audio information: information for audio clock playback
	- 07:	
	- 08:	
	- 0C:	
	- 0D:	
	- 0E:	

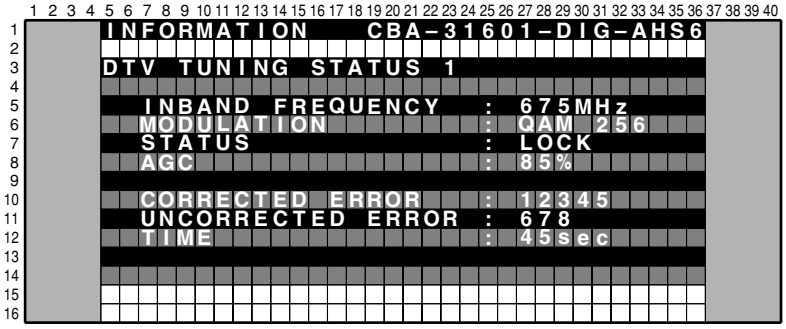
9. TUNER SIGNAL INFO



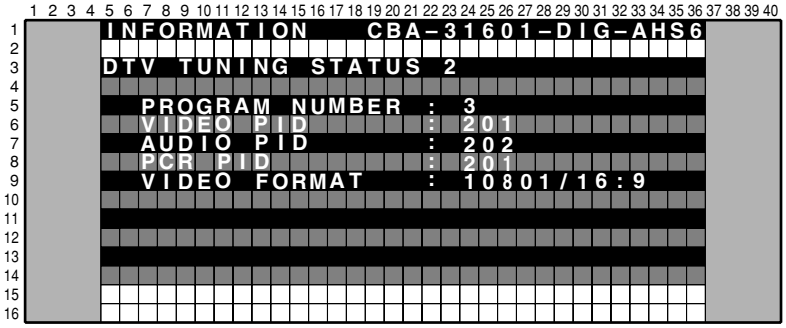
● **Displays input signal status of MVDEC terminal**

Device	SA	Context
MVDEC	00h	Signal distinct result 1
	01h	Signal distinct result 2
	02h	Flag detection output
	15h	Noise level distinction 1
	16h	Noise level distinction 2
	17h	Non-standard evaluation out
	18h	Subcarrier signal detection
	19h	ACC data output
	1Ah	ACC processed information output
	1Dh	Input signal mode setting

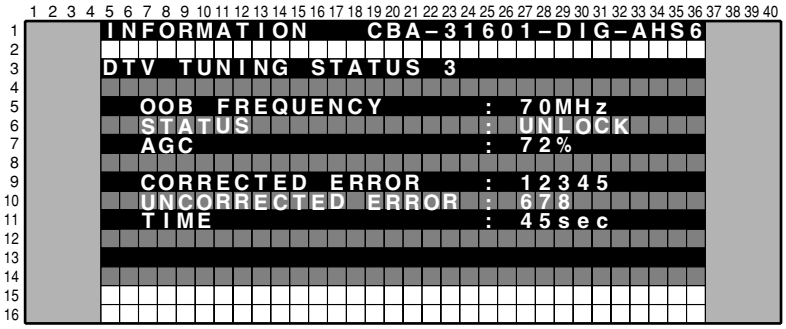
10. DTV TUNING STATUS 1



11. DTV TUNING STATUS 2



12. DTV TUNING STATUS 3



Displays digital broadcast signal information and status upon receiving digital signal.

13. DTV TV-GUIDE BER

Exclusively used for production line. TV-Guide error bit ratio information is displayed.

14. DEBUG INFO

Exclusively used for technical analsyis. Debug information for development use is displayed.

② FUNC. CHECK (Function Check) mode

● **Operation items**

No.	Display	Content	RS-232C
1	FAN <=>	Forces the setting of FAN speed.	—
2	AFT <=>	Controls AFT action by turning ON/OFF.	—

③ COMMON ADJ. mode

1. RGB1

Exclusively used for technical analsyis (details omitted).

④ PANEL FACTORY mode

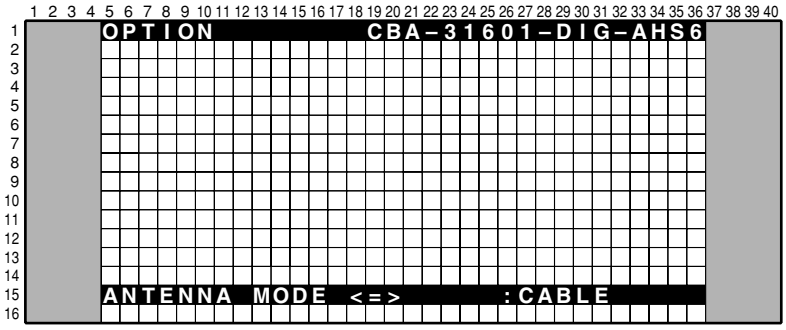
Please refer to panel's service manual.

⑤ OPTION mode

● Operation items

No.	Function/Display	Content	RS-232C
1	PEAK LIMITTER ⇔	Control Peak Limitter (Select ON/OFF)	–
2	EDID WRITE MODE ⇔	DISABLE ⇔ ENABLE	–
3	ANTENNA MODE ⇔	CABLE ⇔ AIR	–

3. ANTENNA MODE



Receiving Cable/Air signal with equipped/unequipped DTB tuner.

① When DTV tuner is equipped
It is effective during tuner function only (others are gray-downed). The currently viewed ANT A/ANT B function's cable/air (both analog and digital) signal are changed. The channel settings are memorized (memorized by DTV side).

② When DTV tuner is unequipped
It is possible for ANT A/ANT B function to receive air/cable signal.
Channel settings are not memorized. But after leaving factory mode, the settings are maintained.
If the air/ cable signal is changed, the reserved allocation map is written.
For example, if the signal is changed to air, then the air's broadcast map is configured, and cable's broadcast map is destroyed.
If the signal is changed to cable, then the cable's broadcast map is configured, and air's broadcast map is destroyed.

OSD Display	Function	Control Device
CABLE	Change the antenna setting to cable	
AIR	Change the antenna setting to air (analog)	

⑥ INITIALIZE mode

● Operation items

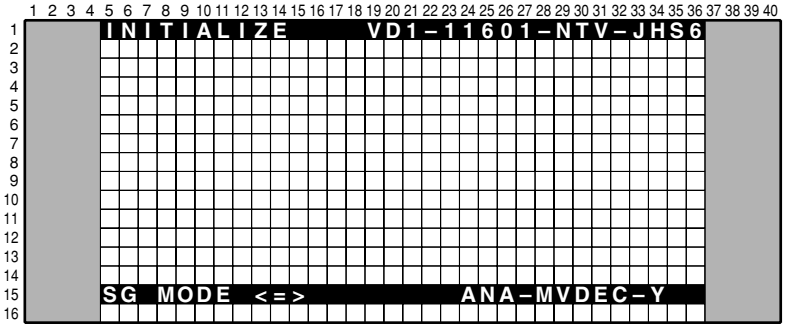
No.	Function/Display	Content	RS-232C
1	SYNC DET(+)	Exclusively used for technical analysis.	–
2	SG MODE ⇔	Paired SG_MODE with SG_PATTERN. Select SG Route.	–
3	SG PATTERN ⇔	Paired SG_MODE with SG_PATTERN. Select SG Pattern.	–
4	SIDE MASK LEVEL(+)	Configure the color of the side mask.	BSL GSL RSL
5	FINAL SETUP(+)	Initialize flash memorys on default product status	FST
6	SR+ ⇔	Select SR+ mode or UART SELECT mode.	–
7	UART SELECT ⇔	Select boud Rate on RS-232C Communication	–
8	CVT AUTO ⇔	Exclusively used for technical analysis.	–
9	HDMI INTR POSITION(+)	Exclusively used for technical analysis.	–

1. SYNC DET(+)

Exclusively used for technical analysis (details omitted).

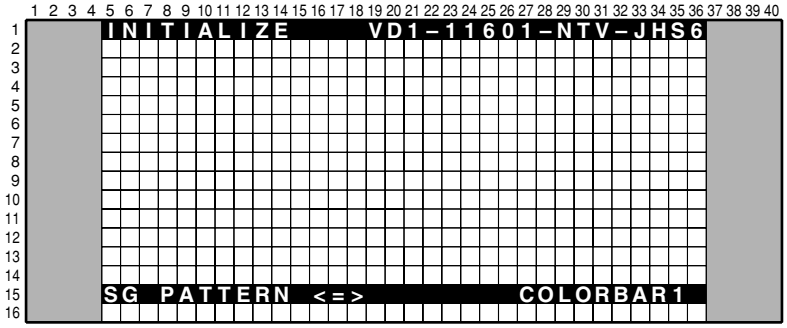
2. SG MODE

SG MODE (SG's route selection)/SG PATTERN (signal pattern selection) are used as pair.
In SG MODE, select the SG route and then select the SG pattern to be sent by the selected route.
In SG MODE, make sure to select the route first.



No.	Display	Content
1	SG OFF	SG Mode is OFF.
2	DIG MVDEC YCBCR	MAIN VDEC: YCbCr (Digital output mode)
3	ANA MVDEC YCBCR	MAIN VDEC: YCbCr (Analog output mode)
4	ANA MVDEC Y	MAIN VDEC: Y (Analog output mode: SG VDEC return setting)
5	ANA AD YCBCR	AD: YCbCr
6	ANA AD RGB	AD: RGB

3. SG PATTERN

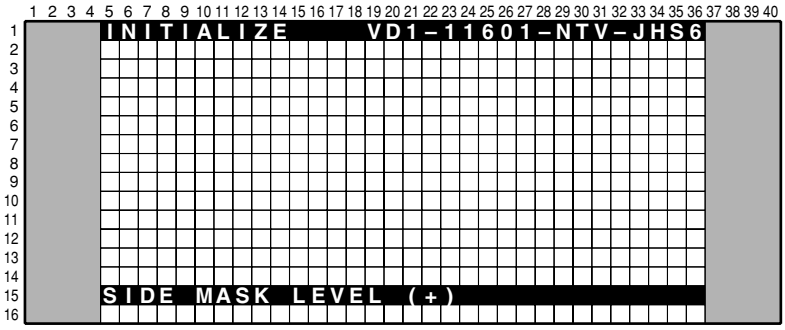


No.	Function/Display	SG Pattern (Brightness IRE Level/Color)	No.	Function/Display	SG Pattern (Brightness IRE Level/Color)
1	COLOR BAR1	Colorbar (75%)	11	RASTER4	Raster (75% Green)
2	COLOR BAR2	Colorbar (100%)	12	RASTER5	Raster (75% Magenta)
3	RAMP1	Ramp (100% White)	13	RASTER6	Raster (75% Red)
4	RAMP2	Ramp (100% Yellow)	14	RASTER7	Raster (75% Blue)
5	RAMP3	Ramp (75% Green)	15	RASTER8	Raster (-% Black)
6	RAMP4	Ramp (75% Red)	16	10STEP1	10STEP (100% White)
7	RAMP5	Ramp (75% Blue)	17	10STEP2	10STEP (100% Yellow)
8	RASTER1	Raster (100% White)	18	10STEP3	10STEP (75% Green)
9	RASTER2	Raster (75% Yellow)	19	10STEP4	10STEP (75% Red)
10	RASTER3	Raster (75% Cyanide)	20	10STEP5	10STEP (75% Blue)

Notes when using SG MODE/SG PATTERN

- During factory mode, choose the correct route when changing.
- Basically, during VDEC SG output, make sure to connect SG output's Y or G to the AVI input terminal of VDEC.
- During SG MODE, turn off the blanking 50IRE setup function.
- During VDEC SG output, set the YC seperation setting to NTSC.
- It is possible to use ANALOG OUT MODE together during DIGITAL OUT MODE.
  The Main VDEC can output digital color difference, in which colors will appear. But the route to VDEC input cannot be analysed therefore care should be taken when using. Depending on the situation, please use the proper analog/digital output.
- The SG MODE outputs color difference and RGB only. Therefore, in the case of CVBS, only the Y input is used resulting in no color. This is not a damage result nor error.
- The SG MODE's ANA AD RGB (route to input 525i to AD by RGB) as a set's route, the setting does not exist.
  For this account the latter part from MVDEC does not have set values, resulting in having funny colors in colorbar, the brightness changes after switching, etc.
  This is not a damage result nor error.
- Depending on MVDEC's part version, ANA_MVDEC_YCBCR may not display colors.

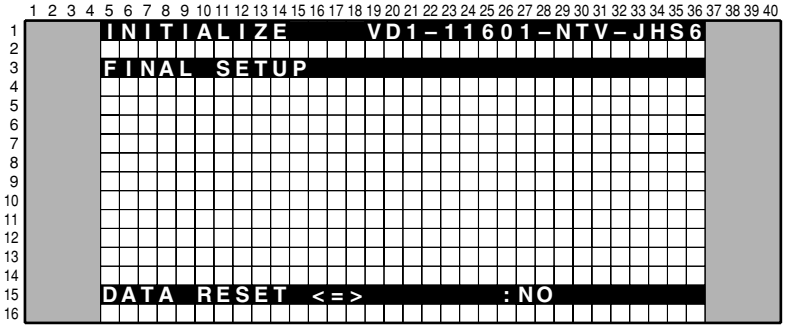
4. SIDE MASK LEVEL



To configure sidemask's R, G, B level (To adjust the values, input signal is required).

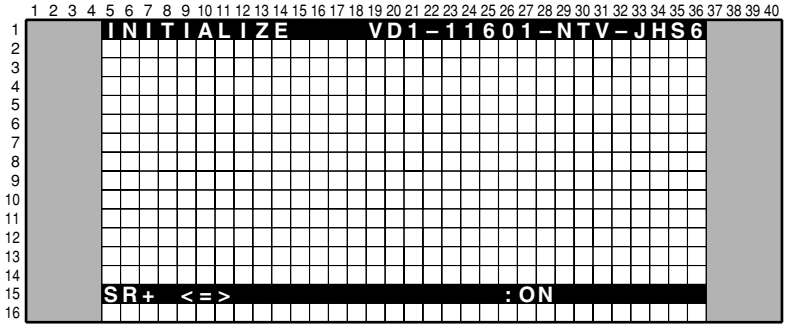
No.	Display	Content	RS-232C
1	R MASK LEVEL ⇔	Adjust Side Mask R (Adjustable range: 000-255)	RSL
2	G MASK LEVEL ⇔	Adjust Side Mask G (Adjustable range: 000-255)	GSL
3	B MASK LEVEL ⇔	Adjust Side Mask B (Adjustable range: 000-255)	BSL

5. FINAL SETUP



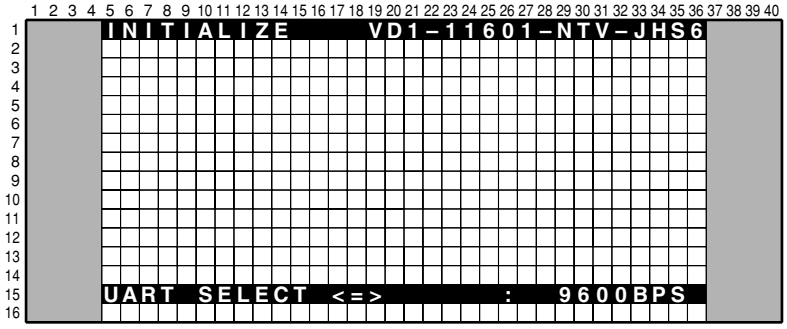
To reset each memory value to factory default values. Factory command is "FST".
When the configuration is set to <NO> and the [SET] key is pressed, no action is taken and the menu returns to previous screen.
When the configuration is set to <YES> and the [SET] key is pressed for 5 seconds, the reset action executes.

6. SR+



To use SR+, select ON. To use RS-232C, select OFF.

7. UART SELECT



When SR+ is OFF, UART SELECT can be selected.
When SR+ is ON, UART SELECT cannot be selected.

Option No.	Display	Operation / Control	RS-232C
1 (Initial setting)	----	To Set to SR+ (9600bps)	SR+ is ON
2	1200	To Set to RS-232C (1200bps)	SR+ is OFF
3	2400	To Set to RS-232C (2400bps)	SR+ is OFF
4	4800	To Set to RS-232C (4800bps)	SR+ is OFF
5	9600	To Set to RS-232C (9600bps)	SR+ is OFF
6	19200	To Set to RS-232C (19200bps)	SR+ is OFF
7	38400	To Set to RS-232C (38400bps)	SR+ is OFF

8. CVT AUTO

Exclusively used for technical analysis (details omitted).

9. HDMI INTR POSITION (+)

Exclusively used for technical analysis (details omitted).

6.7 LIST OF RS-232C COMMANDS

RS-232C commands can be used in Service Factory mode. Before using RS-232C commands, it is necessary to change the factory presetting. See "6.2 USING RS-232C COMMANDS."
Also the RS-232C commands for the panel is not listed. Please refer to panel's service manual.

Command	Operation	Remarks
B		
BSL	Adjust side mask B	
C		
CNG	Clearing MR NG information	
CHR	Clearing MR Hour meter	
CTM	Clearing the modification log	
D		
DW*	Decreasing the adjustment value by*	*:1-9, 0 (0 means 10), F (making the adjustment value the minimum)
F		
FAN	Turning Service Factory mode off.	
FAY	Turning Service Factory mode on.	
FST	Final Set Up	
G		
GSL	Adjusting side mask G	
I		
INA******###	Selection of tuner for digital signals (Antenna A) and terrestrial analog signals (Antenna A)	****** = Major Channel Number ### = Minor Channel Number
INA***	Selection of tuner for terrestrial analog signals (AntennaA)	*** = Channel Number
INB***	Selection of tuner for terrestrial analog signals (Antenna B)	*** = Channel Number Cable: 1-125ch, Air: 2-69ch
ING	Selection of iLink input functions	
INH	Selection of Home Gallery input functions	Elite Mode only
INPS01	Input selection: input 1	
INPS02	Input selection: input 2	
INPS03	Input selection: input 3	
INPS04	Input selection: input 4	
INPS05	Input selection: input 5	
O		
OSDS00	Turning On-Screen Display ON	Prohibit On-Screen Display.
OSDS01	Turning On-Screen Display OFF	Permit On-Screen Display.
P		
POF	Turning the power off.	
PON	Turning the power on.	
Q		
QS1	Obtaining the version data for each device.	
QS6	Obtaining the any version.	
QMT	Obtaining the MR temperature information.	
QNG	Obtaining NG data of the MR.	
R		
RSL	Adjust side mask R	
T		
TSN	Disable the TRAP switch	
TSY	Enable the TRAP switch	
U		
UP*	Increasing the adjustment value by *	*:1-9, 0 (0 means 10), F (making the adjustment value the maximum)
Z		
ZME	Initialize video EEPROM data	

6.8 OUTLINE OF COMMANDS

QS1: Returning information on the module and the version of the software.

Order	Part	Data Content	Size	Remarks
0	-	Received Command Name on MR	3 byte	'QS1' only
1	MDU	Display Information 1	1 byte	
2		Display Information 2	1 byte	
3		Display Information 3	1 byte	
4		Display Information 4	1 byte	
5		Display Information 5	1 byte	
6		Boot Version of Module microcomputer.	3 byte	
7		Program Version of Module microcomputer.	8 byte	
8		Boot Version of ASTRA-MANTA	3 byte	
9		Program Version of ASTRA-MANTA	8 byte	
10		Sequence Version (43VIDEO)	4 byte	
11		Sequence Version (43PC)	4 byte	
12		Sequence Version (50VIDEO)	4 byte	
13		Sequence Version (50PC)	4 byte	
14	MR	, (comma)	1 byte	
15		MR Infomation 1	1 byte	
16		MR Infomation 2	1 byte	
17		MR Infomation 3	1 byte	
18		MR Infomation 4	1 byte	
19		Version of IF microcomputer	4 byte	
20		Version of Main microcomputer	8 byte	
21		Boot Version of Main microcomputer	4 byte	
22		Program Version of CARRERA-MANTA	8 byte	
23		Boot Version of CARRERA-MANTA	4 byte	
24		GUI Version of CARRERA-MANTA	8 byte	
25		Enhanced Version of CARRERA-MANTA	8 byte	
26		PIC Version of CARRERA-MANTA	8 byte	

QS6: Returning information of the Flash Device.

Order	Data Content	Size	Remarks
0	Received Command Name on MR	3 byte	'QS6' only
1	Hardware Version of DTV	8 byte	
2	Hardware Serial of DTV	8 byte	
3	Runtime Version of DTV	8 byte	
4	CFE Version	8 byte	
5	KERNEL Version	8 byte	
6	ROOTFS Version	8 byte	
7	FLAGS Information 1 (H/W: 'Y' or 'N')	1 byte	
8	FLAGS Information 2 (1394: 'Y' or 'N')	1 byte	
9	FLAGS Information 3 (DVR: 'Y' or 'N')	1 byte	
10	FLAGS Information 4 (FONTS: 'Y' or 'N')	1 byte	
11	FLAGS Information 5 (DFAST: 'Y' or 'N')	1 byte	
12	Version of CCD-UCOM	4 byte	
13	Version of PC-CARD	8 byte	
14	User Password	4 byte	

QMT: Returning information of MR temperature and FAN speed.

Order	Data Content	Size	Remark
0	Received Command Name on MR	3 byte	'QMT' only
1	MR Temperature	3 byte	
2	MR FAN Speed	1 byte	0: STOP 1: MIN 2: MAX

QNG: Returning data (logs keep on Main microcomputer) on shutdown of Media Receiver.

Order	Data	Size	Context
0	Received Command Name on MR	3 byte	'QNG' only
1	Latest NG data	1 byte	
2	Data of subcategory for the latest NG	1 byte	
3	Data of MR hour meter for the latest NG	7 byte	
4	Data of temperature for the latest NG	3 byte	
5	2nd latest NG data	1 byte	
6	Data of subcategory for the 2nd latest NG	1 byte	
7	Data of MR hour meter for the 2nd latest NG	7 byte	
8	Data of temperature for the 2nd latest NG	3 byte	
:	:	:	
29	8th latest NG data	1 byte	
30	Data of subcategory for the 7th latest NG	1 byte	
31	Data of MR hour meter for the 7th latest NG	7 byte	
32	Data of temperature for the 7th latest NG	3 byte	

• Details of Data and subcategory

Data	Cause of Shutdown	Remarks
0	Normal	
1	Failure of communication to Module microcomputer	
2	3-wire Serial Communication of Main microcomputer.	Subcategory ⇒ 1
3	IIC Communication failure of Main microcomputer	Subcategory ⇒ 2
4	Communication failure of Main microcomputer & Unknown Error	
5	Fan stopped	
6	Abnormally high temperature at MR.	
7	Failure of Digital Tuner	Subcategory ⇒ 3
8	Abnormally in RST2 of MR (power decrease of DC-DC converter)	
9	Failure at Home Gallary	Subcategory ⇒ 4

• Data on Subcategories for failure in 3-wire serial communication of Main microcomputer (subcategory 1)

Data	Cause of Shutdown	Remarks
0	Non subcategory	
1	Communication failure of IF microcomputer	Power OFF
2	MANTA communication failure (MULIT1)	Power OFF
4	MANTA communication failure (I/P)	
5	MANTA communication failure (D-SEL)	

• Data on Subcategories for failure in IIC communication of Main microcomputer (subcategory 2)

Data	Cause of Shutdown	Data	Cause of Shutdown
0	Non subcategory	A	AD/PLL
1	Analog Tuner 1 (Front End 1)	B	HDMI
2	Analog Tuner 2 (Front End 2)	C	TMDS Tx
3	MPX	D	TMDS Rx
4	AV Switch	E	M2 Communication
5	RGB Switch	F	M2 Busy
6	CCD	G	64k EEPROM
7	GCR		
8	Main VDEC		
9	Sub VDEC		

• Data on Subcategories for failure in DTB communication of Main microcomputer (subcategory 3)

Data	Cause of Shutdown	Remarks
0	Non subcategory	
1	Failure to DTB Starting	
2	Communication failure to DTB	
3	DTB Device Error	
4	TV-Guide Error	

• Data on Subcategories for failure at Home Gallery (subcategory 4)

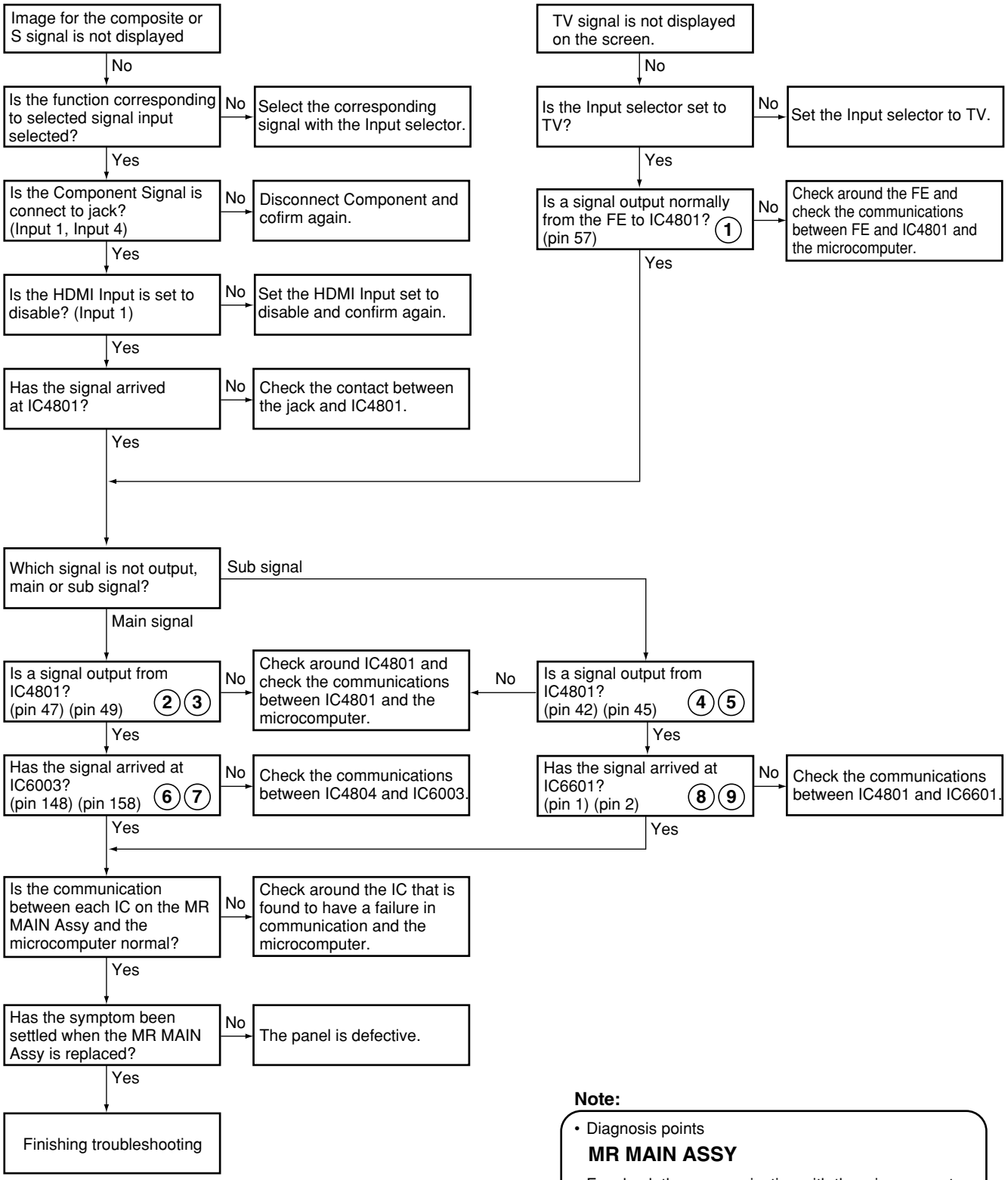
Data	Cause of Shutdown	Remarks
0	Non subcategory	
1	Failure of PC Card Communication	
2	Failure of PC Card	
3	PC Card Reset NG	

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 TROUBLESHOOTING

● Image for the composite or S or TV signal is not displayed



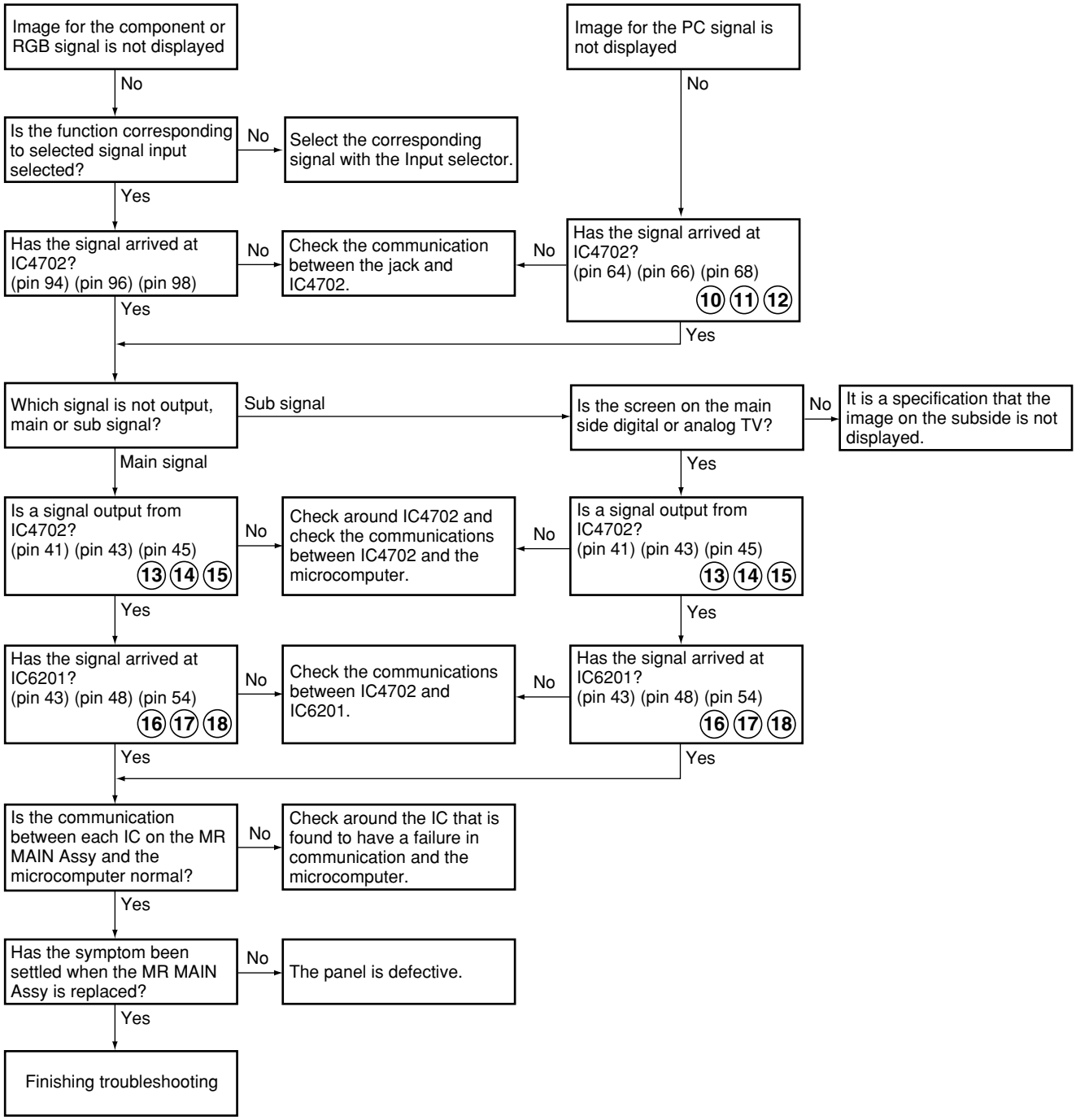
Note:

- Diagnosis points

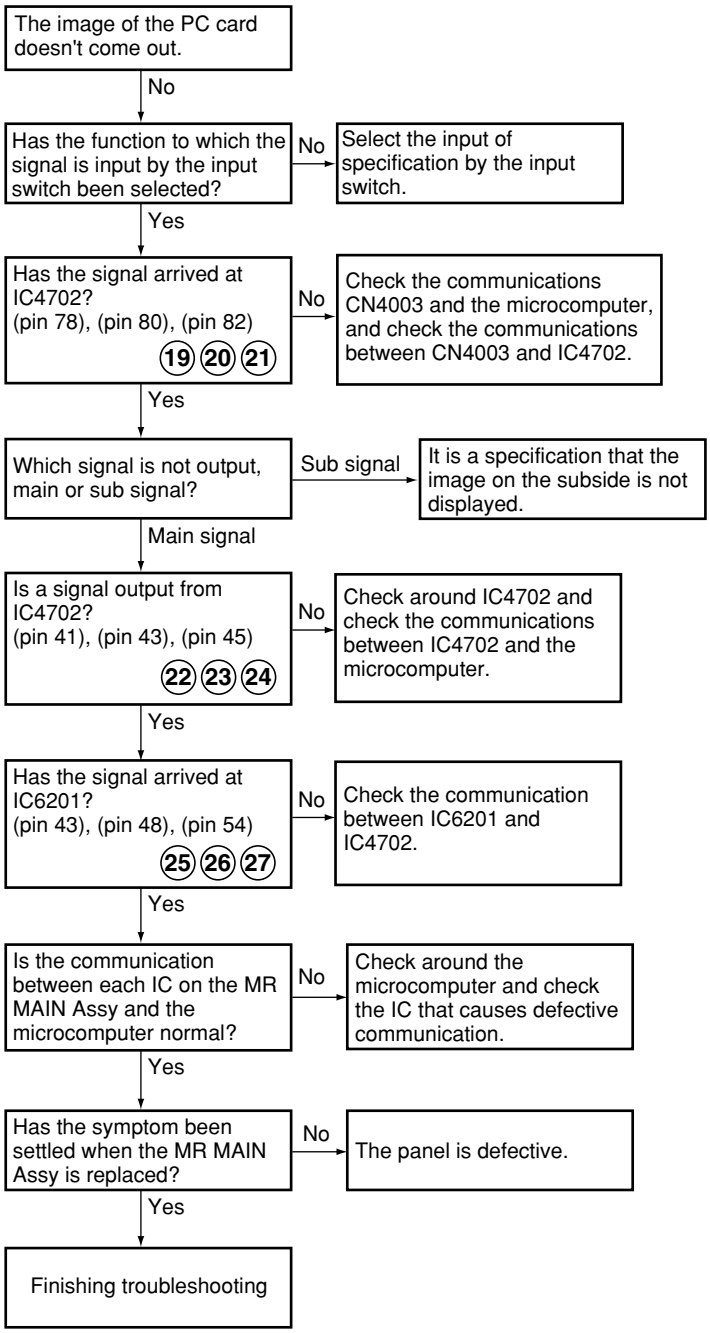
  MR MAIN ASSY

- For check the communication with the microcomputer, refer to the section 6.3 SERVICE FACTORY MODE.
- The encircled numbers denote measuring point in the Waveforms for Troubleshooting.

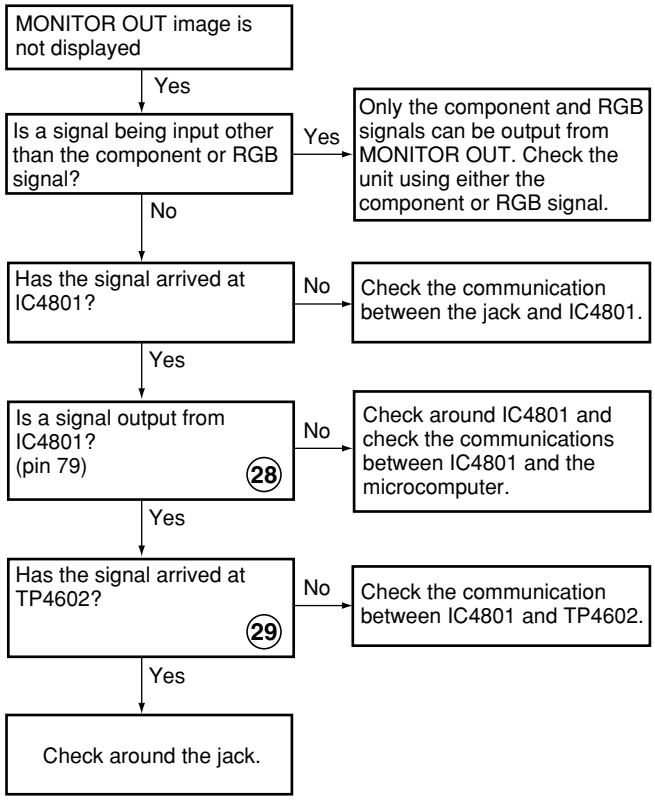
● Image for the component or RGB or PC signal is not displayed



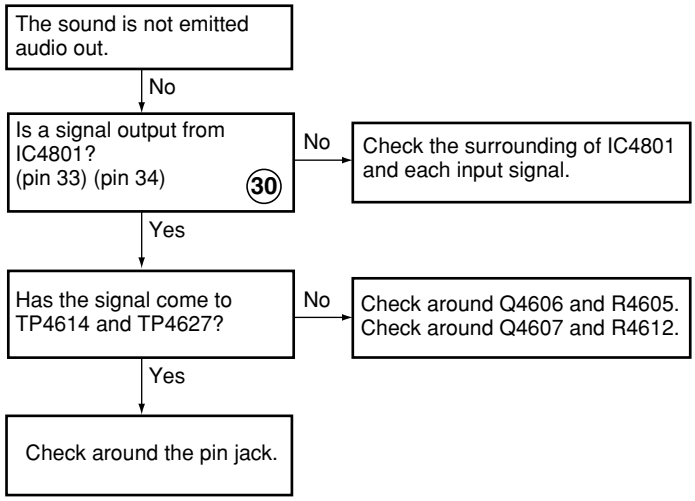
● The image of the PC card doesn't come out



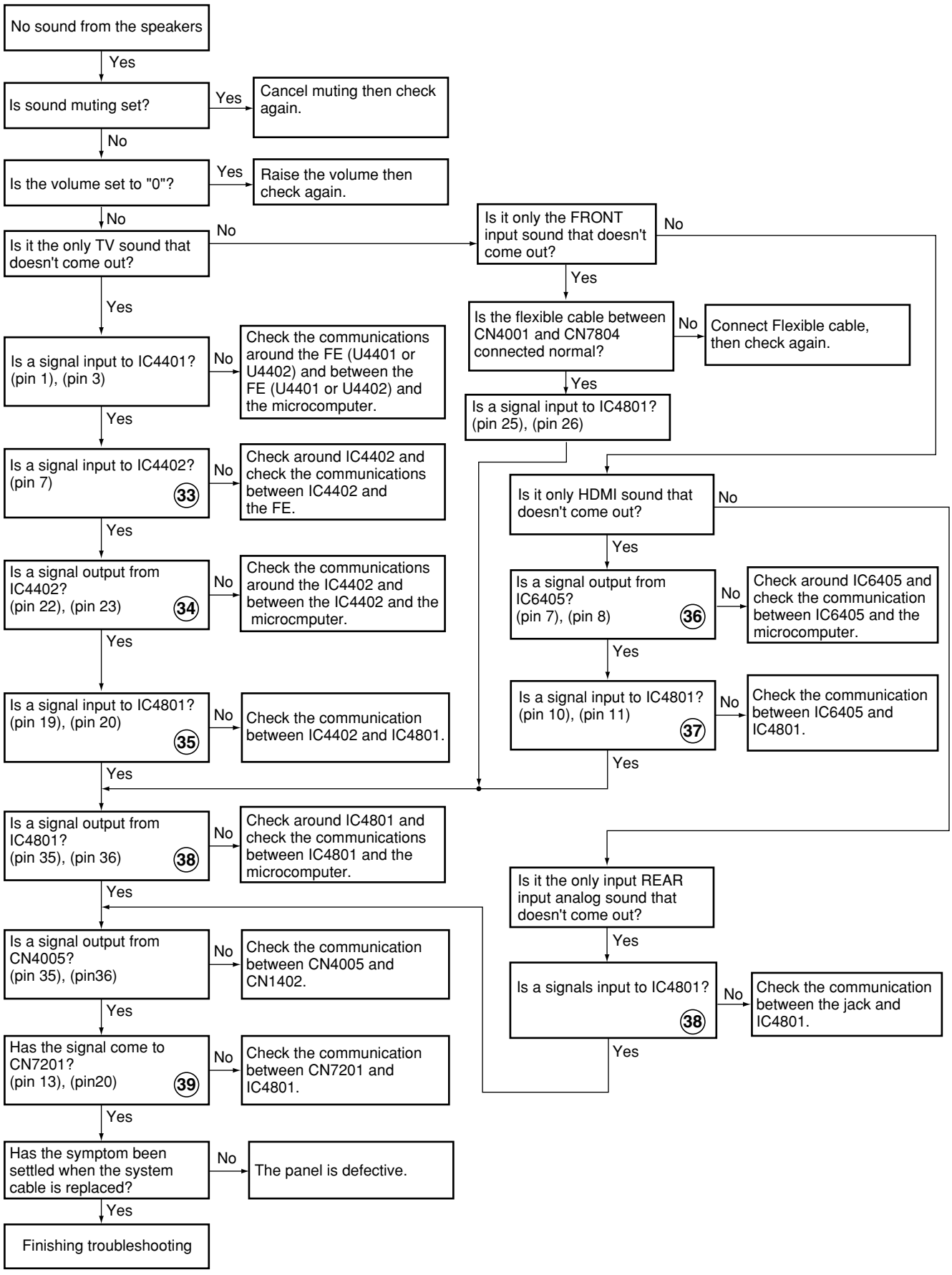
● MONITOR OUT image is not displayed



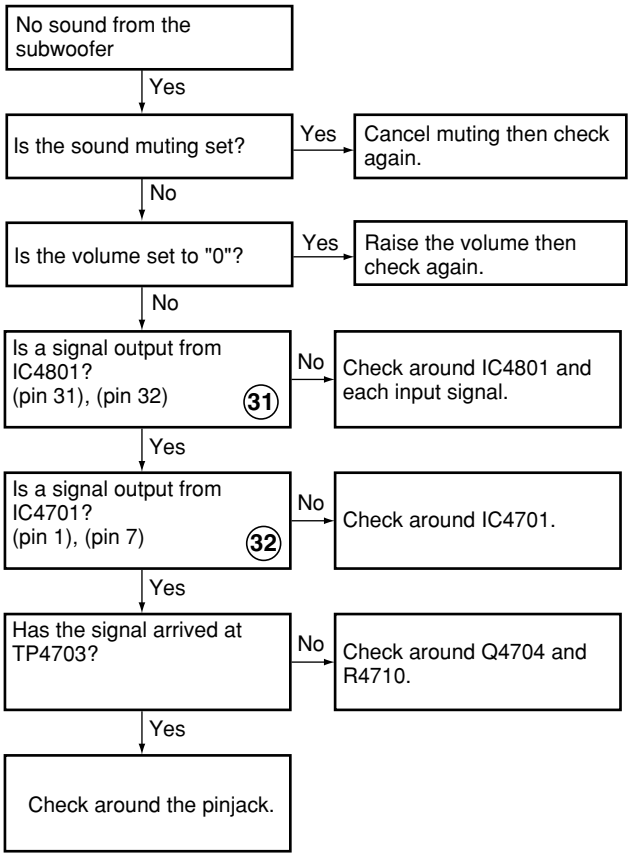
● The sound is not emitted audio out



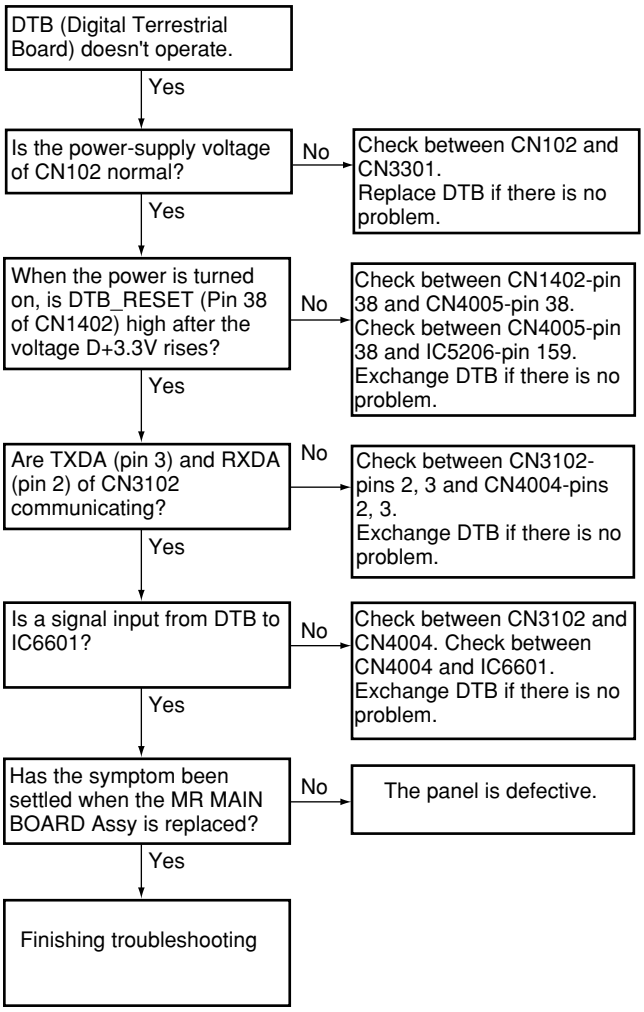
● No sound from the speakers



● No sound from the subwoofer



● DTB (Digital Terrestrial Board) doesn't operate

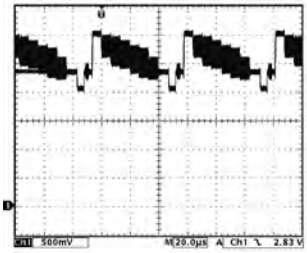


● Waveforms for Troubleshooting

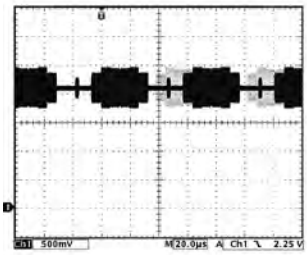
MR MAIN ASSY

• Color-bar input unless otherwise noted

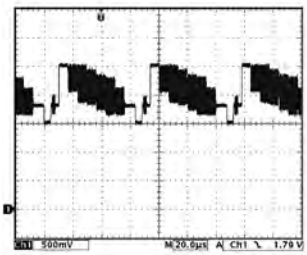
① IC4801-pin 57
V: 500mV/div. H: 20µsec/div.



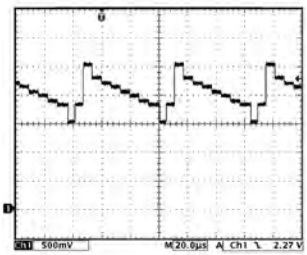
② IC4801-pin 47 S-Video
V: 500mV/div. H: 20µsec/div.



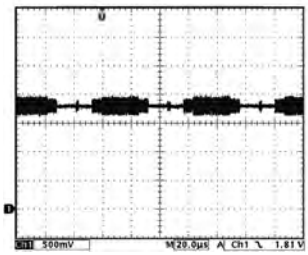
③ IC4801-pin 49 Composite
V: 500mV/div. H: 20µsec/div.



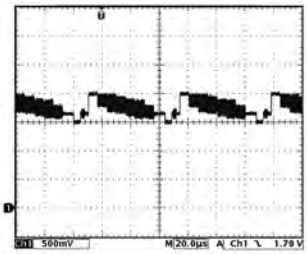
IC4801-pin 49 S-Video
V: 500mV/div. H: 20µsec/div.



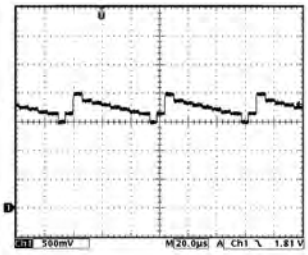
④ IC4801-pin 42 S-Video
V: 500mV/div. H: 20µsec/div.



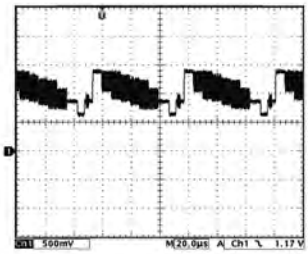
⑤ IC4801-pin 45 Composite
V: 500mV/div. H: 20µsec/div.



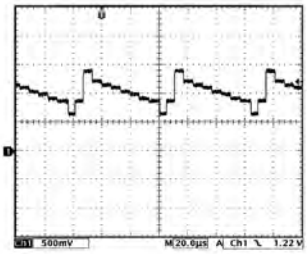
IC4801-pin 45 S-Video
V: 500mV/div. H: 20µsec/div.



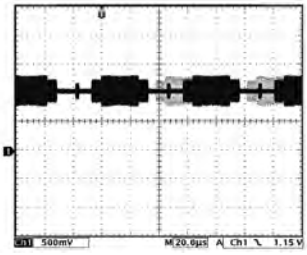
⑥ IC6003-pin 148 Composite
V: 500mV/div. H: 20µsec/div.



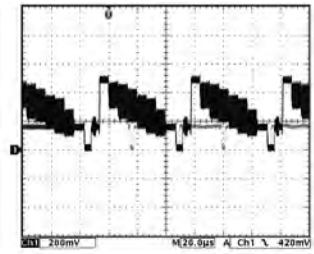
IC6003-pin 148 S-Video
V: 500mV/div. H: 20µsec/div.



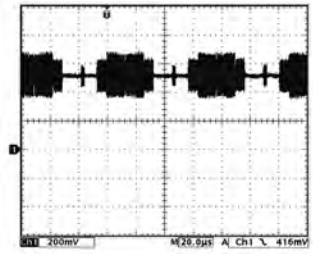
⑦ IC6003-pin 158 S-Video
V: 500mV/div. H: 20µsec/div.



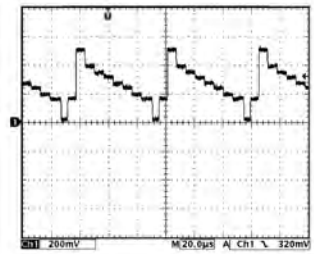
⑧ IC6001-pin 1 Composite
V: 200mV/div. H: 20µsec/div.



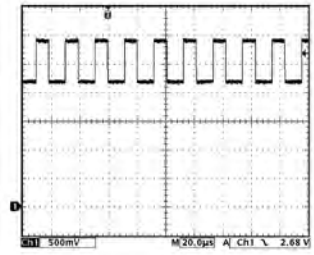
IC6001-pin 1 S-Video
V: 200mV/div. H: 20µsec/div.



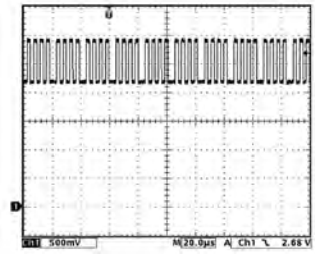
⑨ IC6002-pin 2 S-Video
V: 200mV/div. H: 20µsec/div.



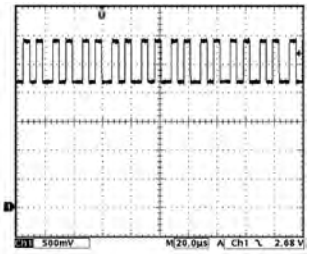
⑩ IC4702-pin 64 PC
V: 500mV/div. H: 20µsec/div.



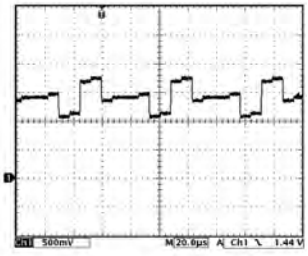
⑪ IC4702-pin 66 PC
V: 500mV/div. H: 20µsec/div.



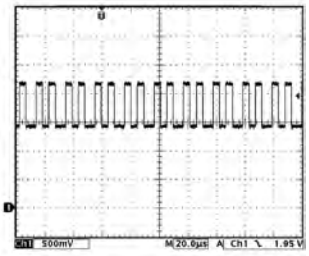
⑫ IC4806-pin 68 PC
V: 500mV/div. H: 20µsec/div.



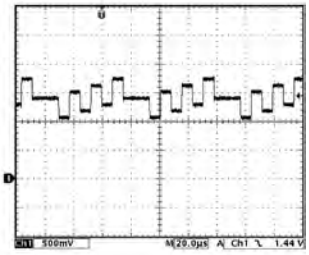
⑬ IC4702-pin 41 Component
V: 500mV/div. H: 20µsec/div.



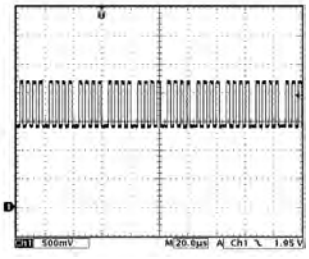
IC4806-pin 41 PC
V: 500mV/div. H: 20µsec/div.



⑭ IC4806-pin 43 Component
V: 500mV/div. H: 20µsec/div.

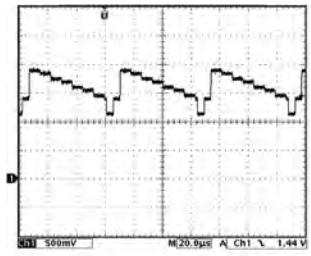


IC4806-pin 43 PC
V: 500mV/div. H: 20µsec/div.

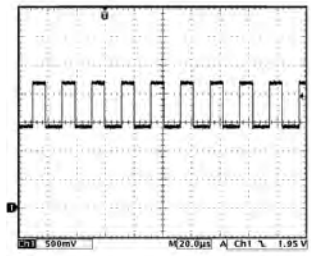


• Color-bar input unless otherwise noted

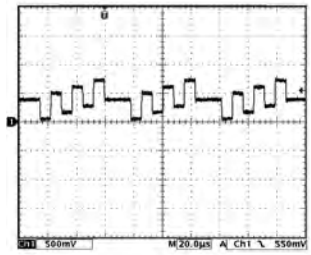
(15) IC4806-pin 45 Component
V: 500mV/div. H: 20µsec/div.



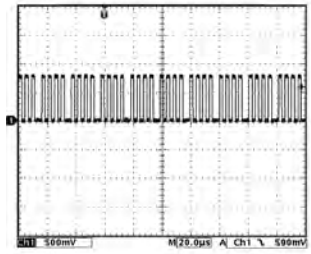
IC4806-pin 45 PC
V: 500mV/div. H: 20µsec/div.



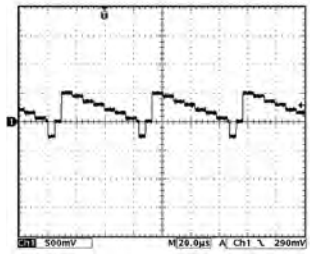
(16) IC6201-pin 43 Component
V: 500mV/div. H: 20µsec/div.



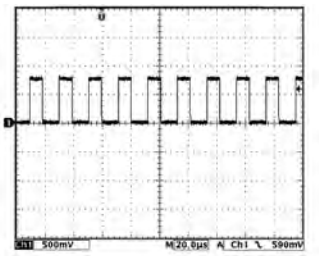
IC6201-pin 43 PC
V: 500mV/div. H: 20µsec/div.



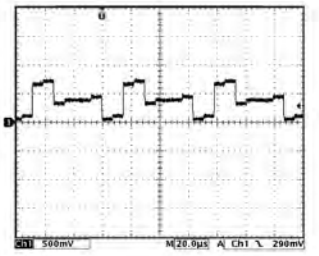
(17) IC6201-pin 48 Component
V: 500mV/div. H: 20µsec/div.



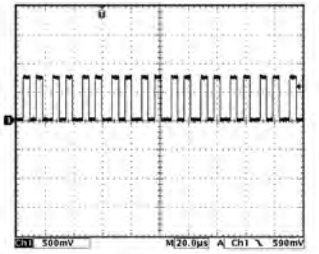
(17) IC6201-pin 48 PC
V: 500mV/div. H: 20µsec/div.



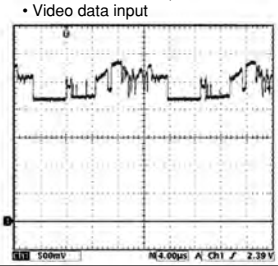
(18) IC6201-pin 54 Component
V: 500mV/div. H: 20µsec/div.



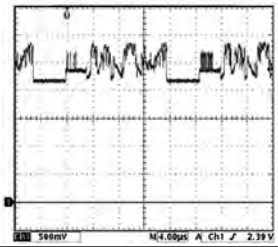
IC6201-pin 54 PC
V: 500mV/div. H: 20µsec/div.



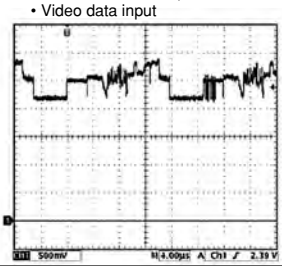
(19) IC4702-pin 78 PC_CARD
V: 500mV/div. H: 20µsec/div.
• Video data input



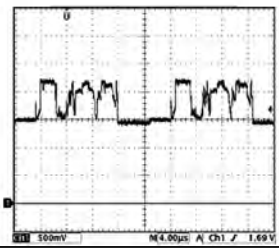
(20) IC4702-pin 80 PC_CARD
V: 500mV/div. H: 20µsec/div.
• Video data input



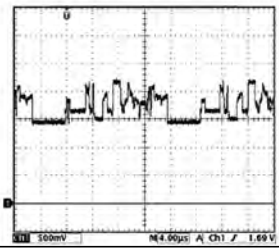
(21) IC4806-pin 82 PC_CARD
V: 500mV/div. H: 20µsec/div.
• Video data input



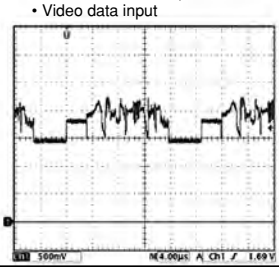
(22) IC4702-pin 41 Component
V: 500mV/div. H: 20µsec/div.
• Video data input



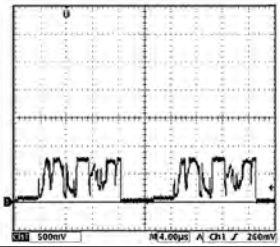
(23) IC4702-pin 43 PC_CARD
V: 500mV/div. H: 20µsec/div.
• Video data input



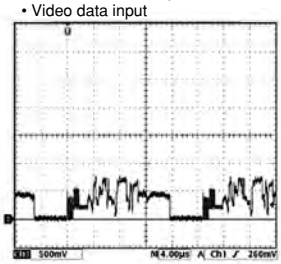
(24) IC4702-pin 45 PC_CARD
V: 500mV/div. H: 20µsec/div.
• Video data input



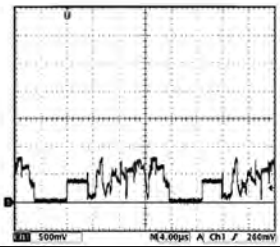
(25) IC6201-pin 43 PC_CARD
V: 500mV/div. H: 20µsec/div.
• Video data input



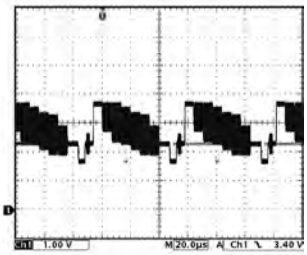
(26) IC6201-pin 48 PC_CARD
V: 500mV/div. H: 20µsec/div.
• Video data input



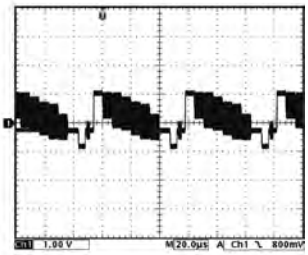
(27) IC6201-pin 54 Component
V: 500mV/div. H: 20µsec/div.
• Video data input



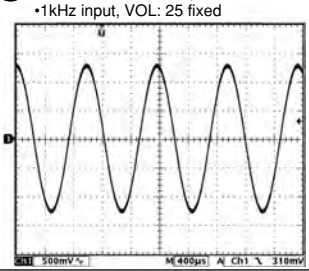
(28) IC4804-pin 79
V: 1V/div. H: 20µsec/div.



(29) R4670
V: 1V/div. H: 20µsec/div.

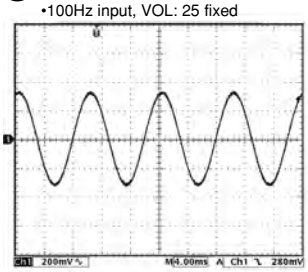


(30) IC4801-pins 33, 34
V: 500mV/div. H: 400µsec/div.
•1kHz input, VOL: 25 fixed

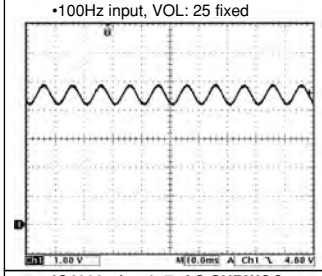


• 1kHz input, VOL: 25 fixed unless otherwise noted

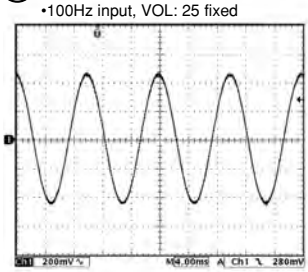
31 **IC4804-pins 31, 32 AC-SUBWOO**
V: 200mV/div. H: 4msec/div.
•100Hz input, VOL: 25 fixed



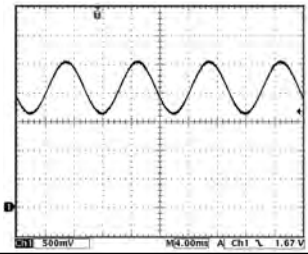
IC4804-pins 31, 32 DC-SUBWOO
V: 1V/div. H: 10msec/div.
•100Hz input, VOL: 25 fixed



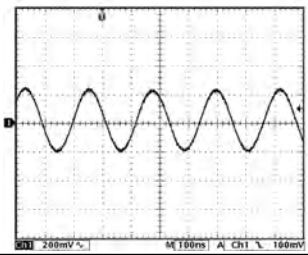
32 **IC4808-pins 1, 7 AC-SUBWOO**
V: 200mV/div. H: 4msec/div.
•100Hz input, VOL: 25 fixed



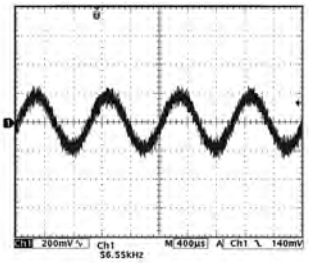
IC4808-pins 1, 7 DC-SUBWOO
V: 500mV/div. H: 4msec/div.
•100Hz input, VOL: 25 fixed



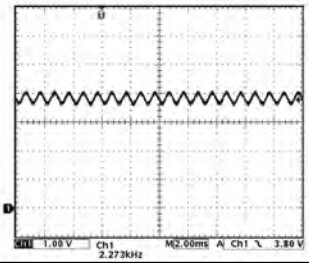
33 **U4401-pin 18 = C4403**
V: 200mV/div. H: 100nsec/div.



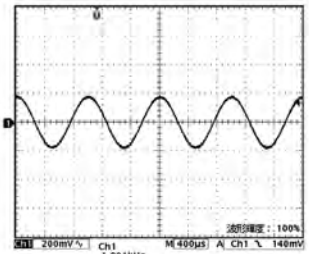
34 **IC4401-pins 30, 31 AC**
V: 200mV/div. H: 400µsec/div.



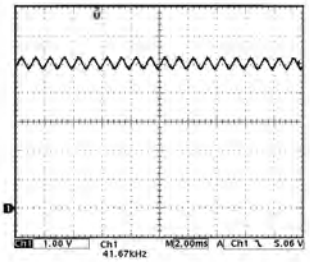
IC4401-pins 30, 31 DC
V: 1V/div. H: 2msec/div.



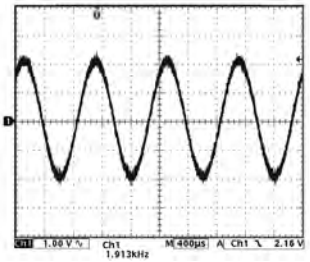
35 **IC4804-pins 19, 20 AC**
V: 200mV/div. H: 400µsec/div.



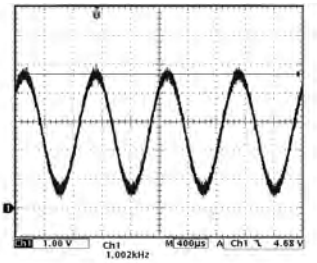
IC4804-pins 19, 20 DC
V: 1V/div. H: 2msec/div.



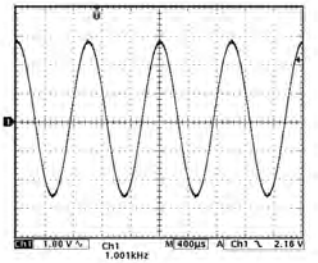
36 **IC6405-pins 7, 8 AC**
V: 1V/div. H: 400µsec/div.



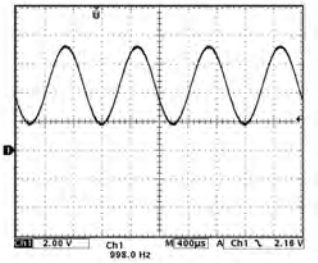
36 **IC6405-pins 7, 8 DC**
V: 1V/div. H: 400µsec/div.



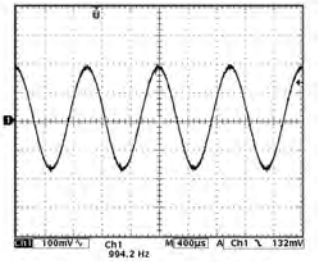
37 **IC4804-pins 10, 11 AC**
V: 1V/div. H: 400µsec/div.



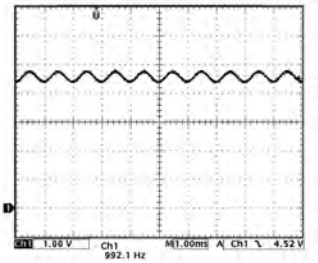
IC4804-pins 10, 11 DC
V: 2V/div. H: 400µsec/div.



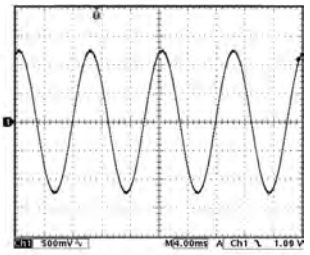
38 **IC4804-pins 35, 36 AC**
V: 100mV/div. H: 400µsec/div.



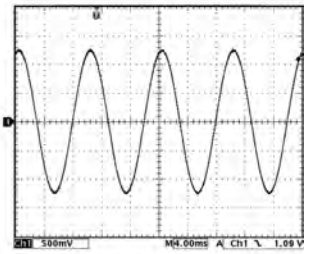
IC4804-pins 35, 36 DC
V: 1V/div. H: 1msec/div.



39 **CN7201-pins 13, 20 AC**
V: 500mV/div. H: 4msec/div.



CN7201-pins 13, 20 DC
V: 500mV/div. H: 4msec/div.



7.1.2 DISASSEMBLY

Note : Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.

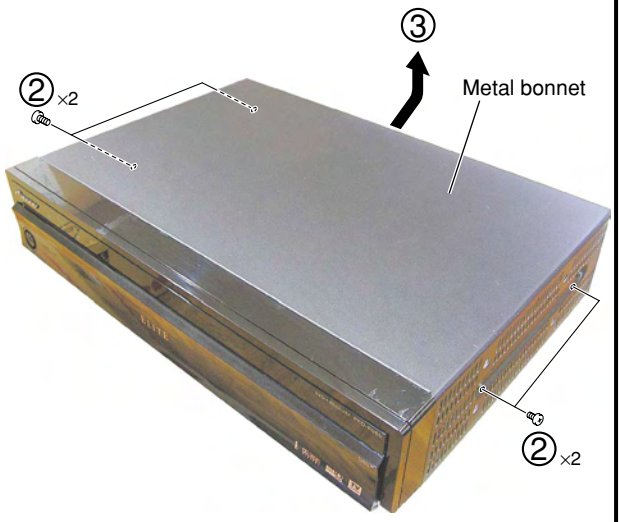
1 Metal Bonnet

① Remove the three screws.

● **Rear view**

② Remove the four screws.

③ Remove the metal bonnet while pulling it backward.



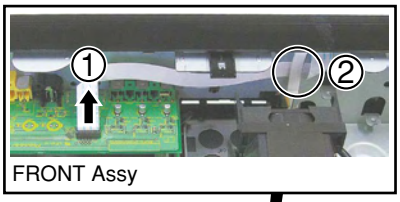
2 Front Panel Section

① Disconnect the flexible cable.

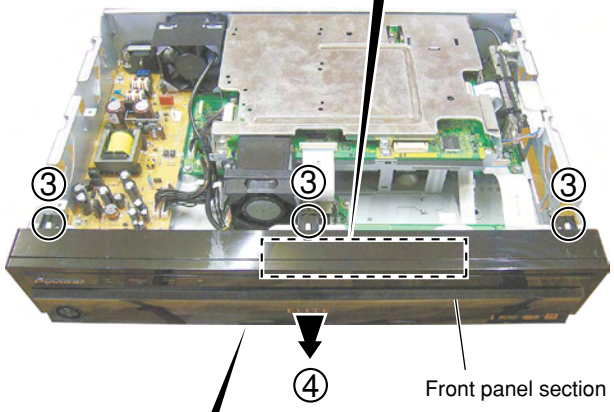
② Remove the flexible cable from the flat clamp.

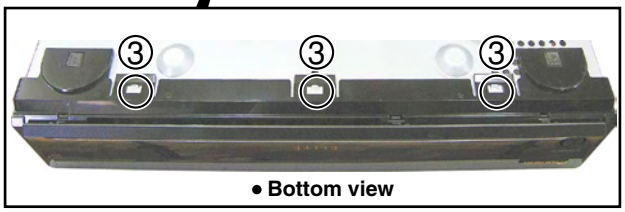
③ Unhook the six hooks.

④ Remove the front panel section.



FRONT Assy



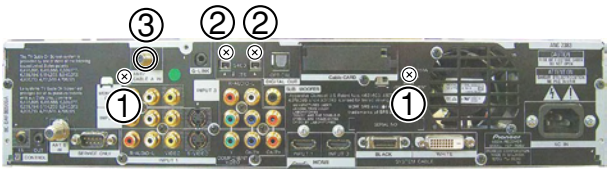


● **Bottom view**

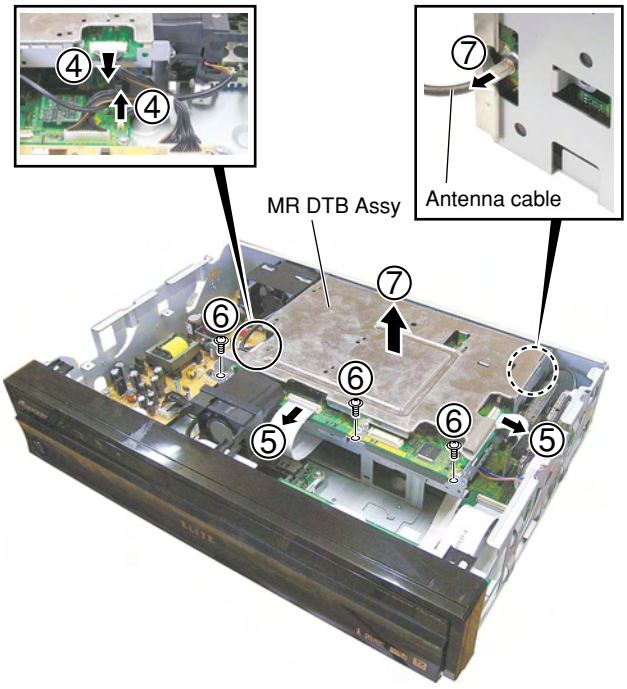
3 MR DTB Assy

Note : MR DTB Assy can remove even if does not remove the front panel section.

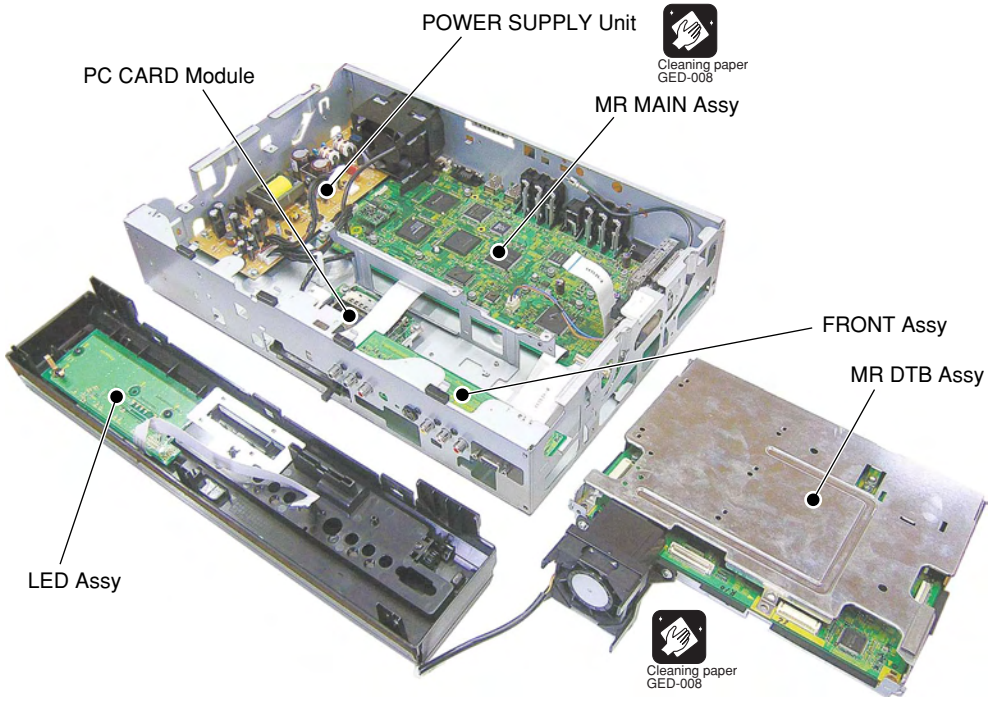
① Remove the two screws.
② Remove the two screws.
③ Remove the one nut.
④ Disconnect the two connectors.
⑤ Disconnect the two flexible cables.
⑥ Remove the three screws.
⑦ Remove the antenna cable.
⑧ Remove the MR DTB Assy.



● **Rear view**



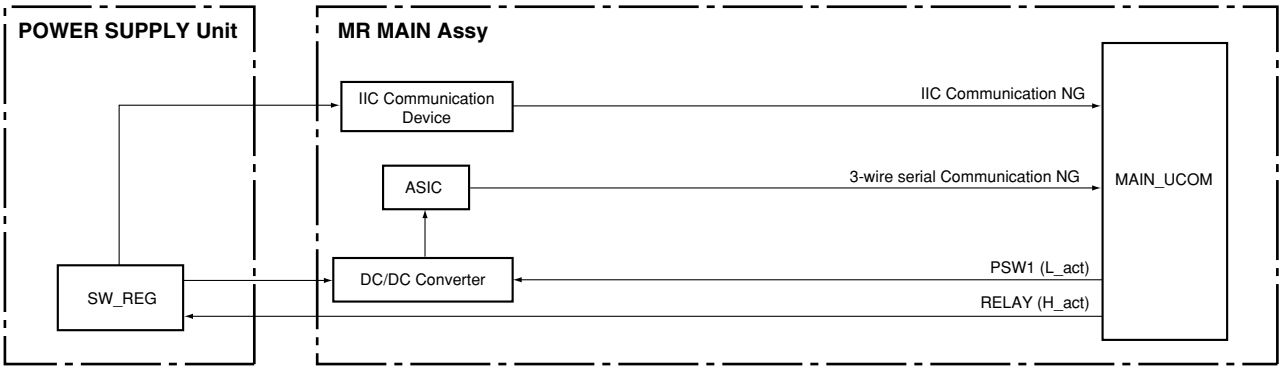
PCB Location



7.2 EXPLANATION
7.2.1 PROCESSING IN ABNORMALITY

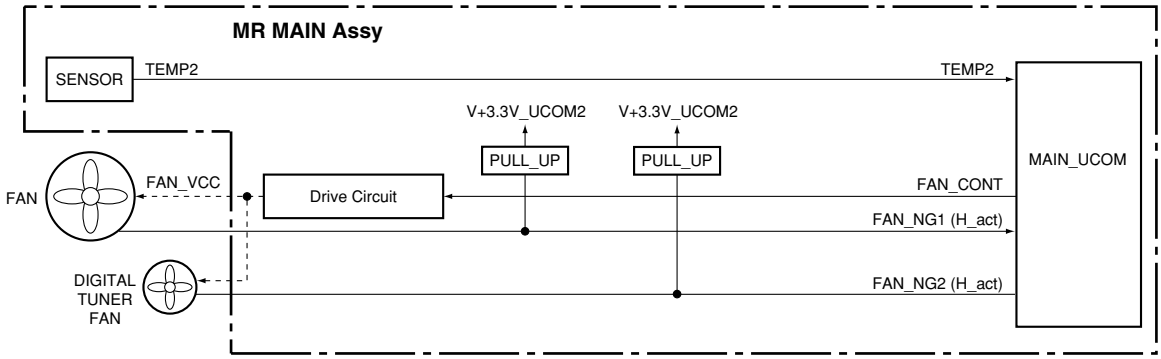
Power supply and DC-DC converter

● **Circuit diagram**



Fan and temperature sensor

● **Circuit diagram**

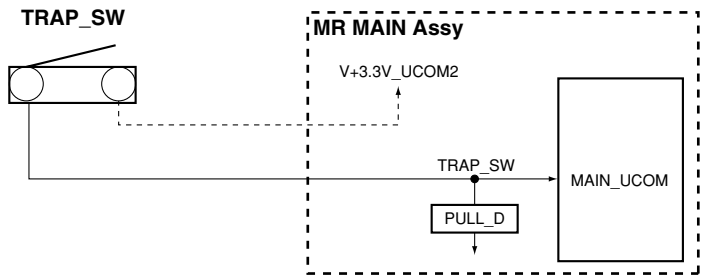


● **Specifications for port monitoring**

Port Name	SD/PD Indication	Assigned Pin	Active
FAN_NG 1	FAN	155	Shutdown with H
FAN_NG 2	FAN	104	Shutdown with H
TEMP2	Abnormally high temperature in the MR	76	Shutdown when the value exceeds the predetermined value

TRAP_SW

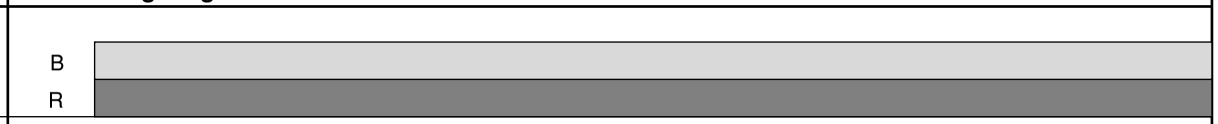
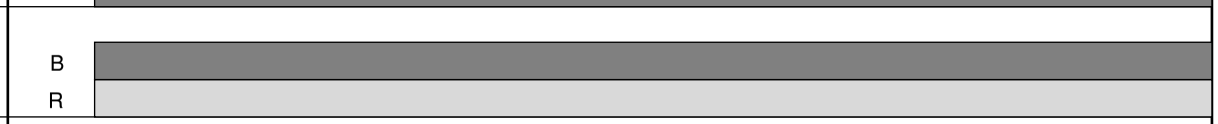
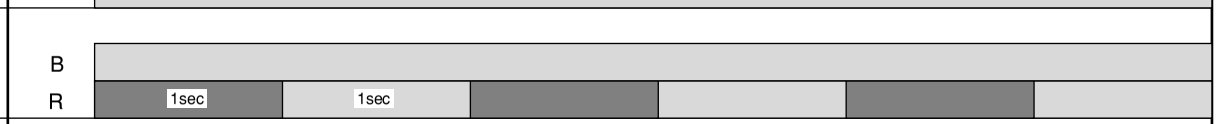
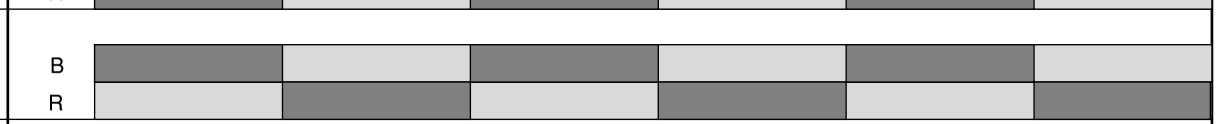
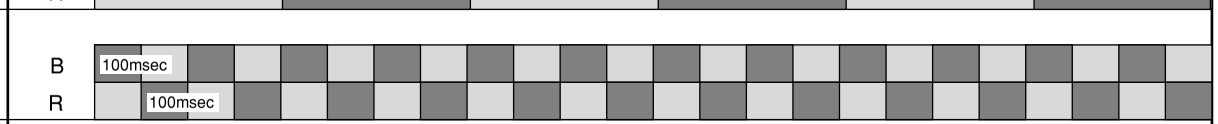
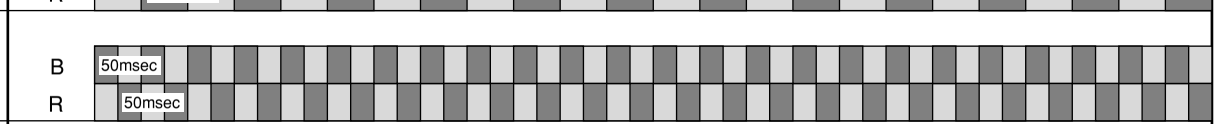
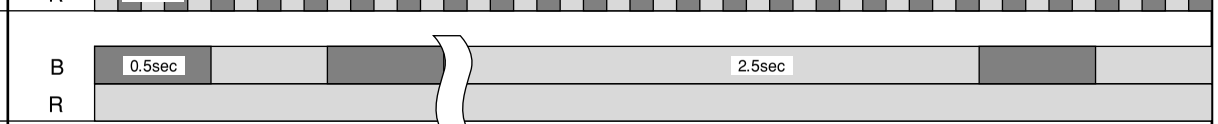
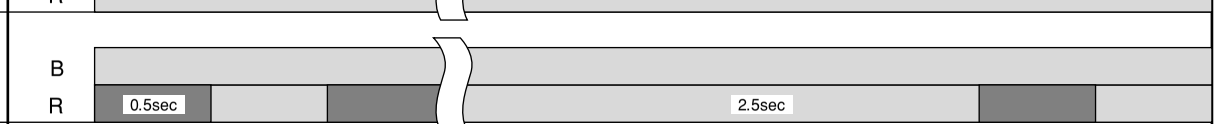
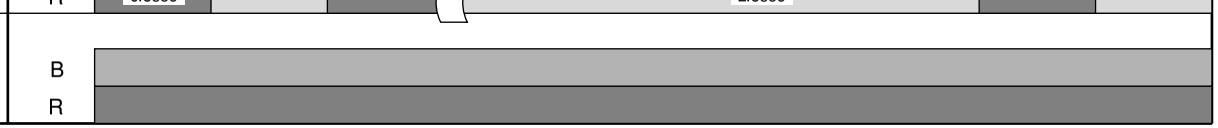
● **Circuit diagram**



● **Specifications for port monitoring**

Port Name	SD/PD Indication	Assigned Pin	Active
TRAP_SW	Modification tried	151	OFF with L

LED-lighting patterns

Status of the Unit		LED-lighting Pattern
Standby, power management	Lit in red	
Power on	Lit in blue	
PDP's power not on	Flashing in red (at 1-sec intervals)	
System cable disconnected *	Flashing alternately in red and blue (at 1-sec intervals)	
Waiting for start of rewriting by the microcomputer		
Waiting for finish of rewriting by the microcomputer		
Shutdown (circuit protection)	Flashing in blue n times (initially at 0.5-sec intervals then 2.5-sec intervals)	
Power-down (circuit protection)	Flashing in red for n times (initially at 0.5-sec intervals then 2.5-sec intervals)	
TRAP switch operation		

* In this case, the red and blue areas on the screen of the panel flash alternately.

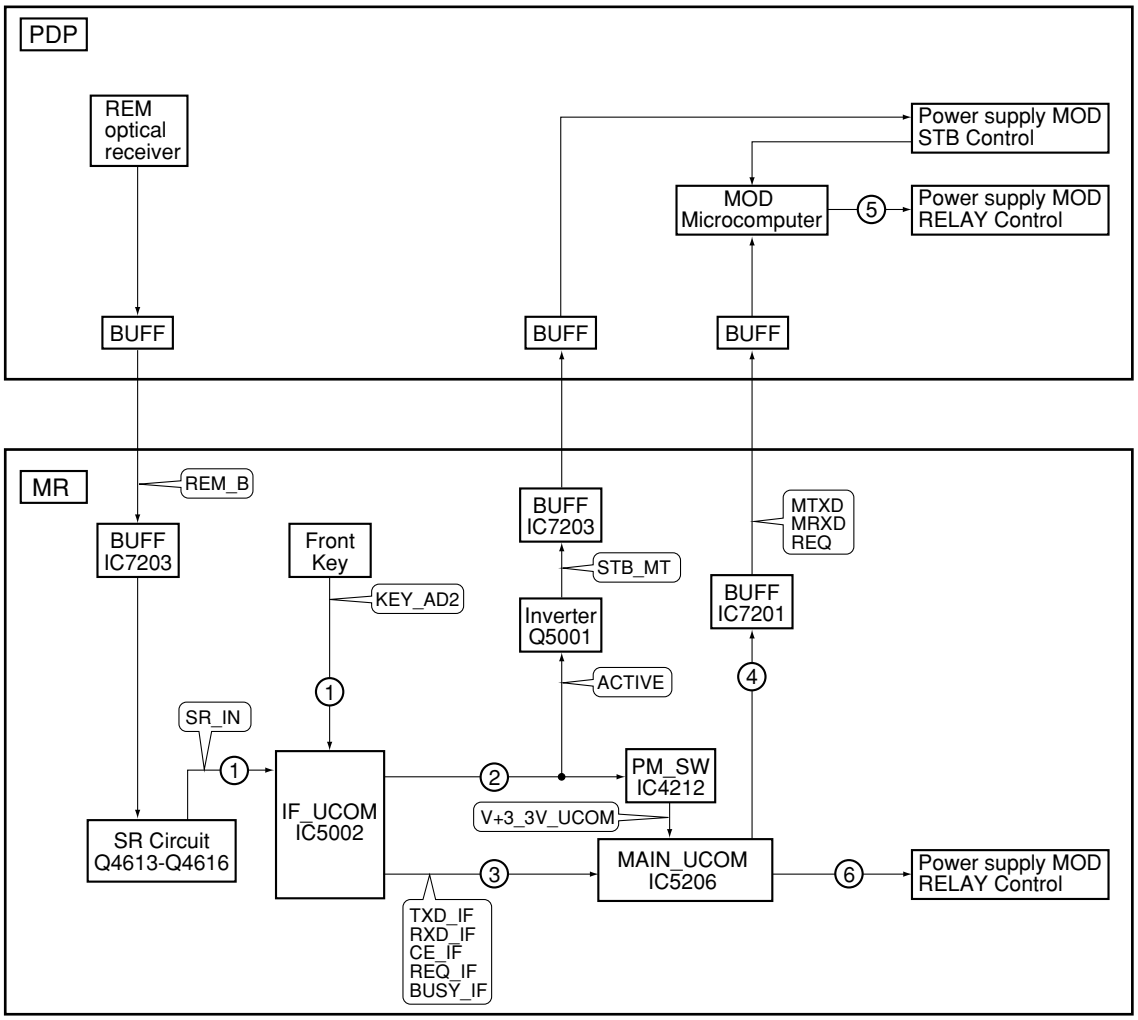
■ Defective points assumed from the number of times of LED flashing

No. of times of LED flashing				Category ∗1	Site detected as defective	Possible defective points (representative examples)	OSD when detected (warning message)
LEDs on the panel		LEDs on the MR					
Red	Blue	Red	Blue				
	Blue 1	Red		SD	Panel drive IC	∗2	None
	Blue 2	Red			Module section IIC	∗2	None
	Blue 3	Red			Power decrease of DIGITAL-DC-DC	∗2	None
	Blue 4	Red			Panel having abnormally high temperature	∗2	Power off. Internal temperature is too high. Check temperature around PDP. [SD04] ∗6
	Blue 5	Red			Short-circuiting of the speakers	∗2	Internal protection circuit turns power off. Is there a short in speaker cable? (SD05)
Red			Blue 6		Module microcomputer	Disconnection of the system cable Defective module microcomputer or its peripheral circuits of the panel (Refer to the service manual of the PDP-436PU or PDP-506PU.) Defective main microcomputer (IC5206) Failure in communication (TXD_MD, RXD_MD, REQ_MD) between the panel's module microcomputer and IC5206 (main microcomputer)	None
Red			Blue 7		3-wire serial connection of the main section	Defective IC5002 or its peripheral circuits Failure in communication (TXD_IF, RXD_IF, CLK_IF, CE_IF, REQ_IF, BUSY_IF) between IC5002 and IC5206 (main microcomputer) Defective IC7001 or its peripheral circuits Failure in communication (TXD_IC3, RXD_IC3, CLK_IC3, IC3_CE, REQ_IC3, BUSY_IC3) between IC7001 and IC5206 (main microcomputer)	None
Red			Blue 8		IIC of the main section	Defective U4401 (FE1) or its peripheral circuits Defective IC4401 (MPX) or its peripheral circuits ∗3 Defective IC4702 (RGB_SW) or its peripheral circuits Defective ICxxxx (GCR) or its peripheral circuits ∗4 Defective IC6001 (S-VDEC) or its peripheral circuits ∗5 Defective IC6404 (HDMI) or its peripheral circuits Defective ICxxxx (PLK-R) or its peripheral circuits Defective IC5405 (TTX-COM, TTX-BSY) or its peripheral circuits ∗3 Defective IC5202 (MA-EEP) or its peripheral circuits Defective U4402 (FE2) or its peripheral circuits Defective IC4801 (AV_SW) or its peripheral circuits Defective IC5602 (CCD) or its peripheral circuits Defective IC6003 (M-VDEC) or its peripheral circuits Defective IC6201 (ADC) or its peripheral circuits Defective IC7202 (PLK-T) or its peripheral circuits Failure in communication (SCL_AV, SDA_AV, SCL_MA, SDA_MA, SCL_EP, SDA_EP, SCL_HDCP, SDA_HDCP) between one of the above devices and IC5206 (main microcomputer)	None
Red			Blue 9		Main microcomputer	Defective IC5206 (main microcomputer) Failure in communication (TXD_IF, RXD_IF, CLK_IF, CE_IF, BUSY_IF) between IC5206 (main microcomputer) and IC5002	None
Red			Blue 10		Fan	Failure in the fan motor, or the fan stopped because of dust attached to the fan	None
Red			Blue 11		MR or unit having abnormally high temperature	The Media Receiver or the unit being used at high temperature	Power off. Internal temperature is too high. Check temperature around media receiver. [SD011]
Red			Blue 12		Digital tuner	Defective DTV tuner Failure in communication (TXD_DT, RXD_DT) between the digital tuner and IC5206 (main microcomputer)	None
Red			Blue 13		ASIC power supply (DC-DC)	Defective U4201 (DD_CON) or short-circuiting elsewhere ∗6	None
Red 2		Red		PD	POWER	∗2	None
Red 3		Red			SCAN	∗2	None
Red 4		Red			SCN-5V	∗2	None
Red 5		Red			Y-DRV	∗2	None
Red 6		Red			Y-DCDC	∗2	None
Red 7		Red			Y-SUS	∗2	None
Red 8		Red			ADRS	∗2	None
Red 9		Red			X-DRV	∗2	None
Red 10		Red			X-DCDC	∗2	None
Red 11		Red			X-SUS	∗2	None
Red 12		Red			D-DCDC	∗2	None
Red 13		Red			IC4	∗2	None
Red 15		Red			UNKNOWN	∗2	None

∗1: Shutdown (SD) is a protective operation controlled by the microcomputer, and you can turn on the unit again using the remote control unit. Power-down (PD) is a protective operation activated by the circuitry and can be reset after AC power is off for about 1 minute.

∗2: Refer to the service manual of the PDP-436PU or PDP-506PU.
∗3: Only for EU and IRD model. ∗4: Only for J model.
∗5: Except for US model. ∗6: Only for one-body model.

7.2.2 POWER ON SEQUENCE



REM_B Comment in the balloon is the reference signal name.
Please confirm the wiring number of PDP side with the service manual of PDP side.

① : Remote controller signal (or, KEY signal) is input into IF microcomputer.
② : IF microcomputer supplies the power supply to Main microcomputer and MOD microcomputer.
③ : IF microcomputer communicates the operation information of Remote controller (or KEY) to Main microcomputer.
④ : Main microcomputer sends in the activation order to MOD microcomputer.
⑤ : MOD microcomputer controls the relay of PDP power supply MOD, and activate the power supply of PDP side.
⑥ : Main microcomputer controls the relay of MR power supply MOD, and activate the power supply of MR side.

7.3 PARTS

7.3.1 IC

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

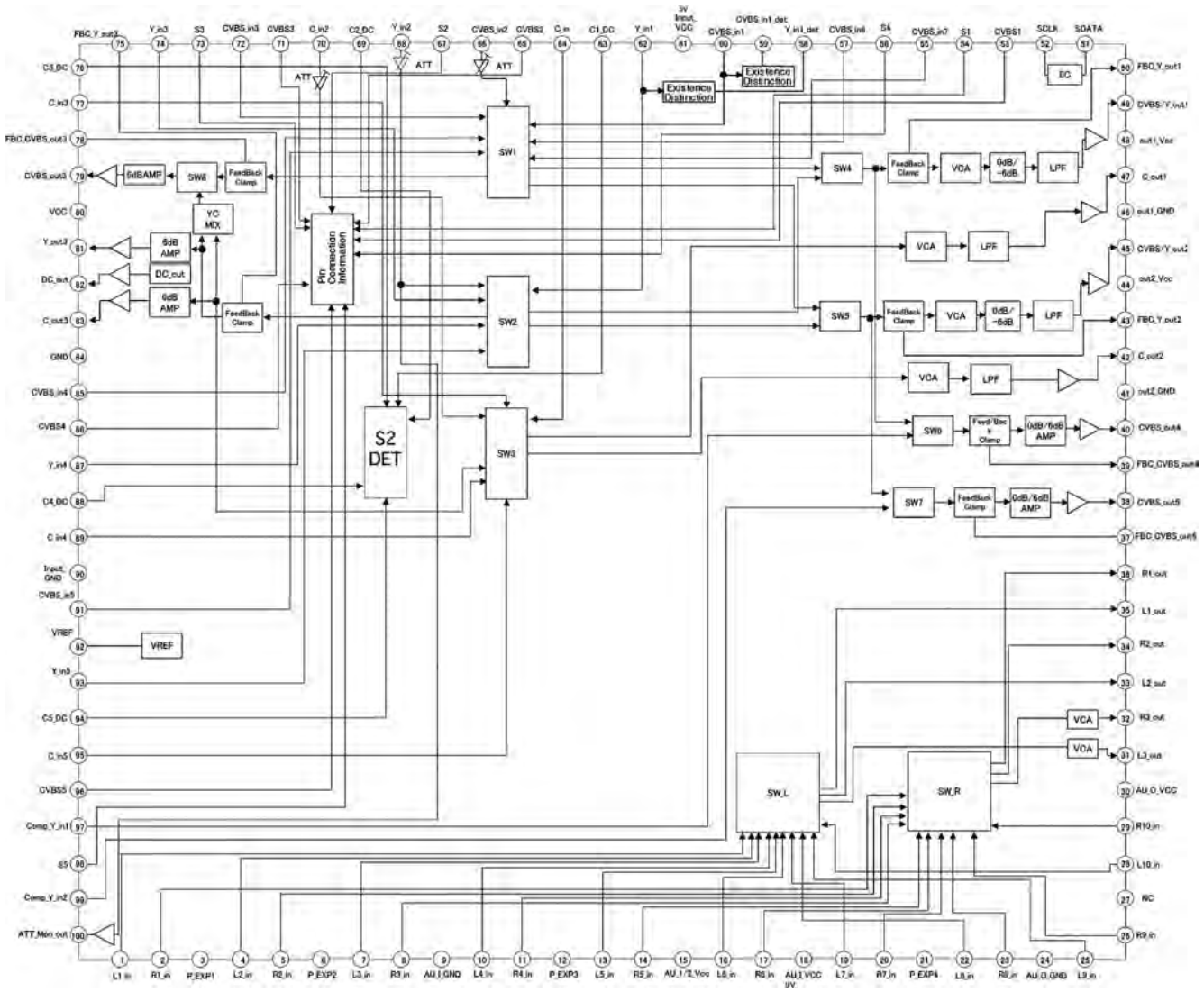
● **List of IC**

R2S11002AFT, R2S11001FT, UPD64015GM-UEU, K4S161622H-TC60, AD9985KSTZ-110, SII9021CTU, K4S643232H-TC60, MBM29DL162TE70TN, SII170BCLG64, AXY1117, AXF1130, AXF1148

■ R2S11002AFT (MR MAIN ASSY: IC4801)

• AV SW

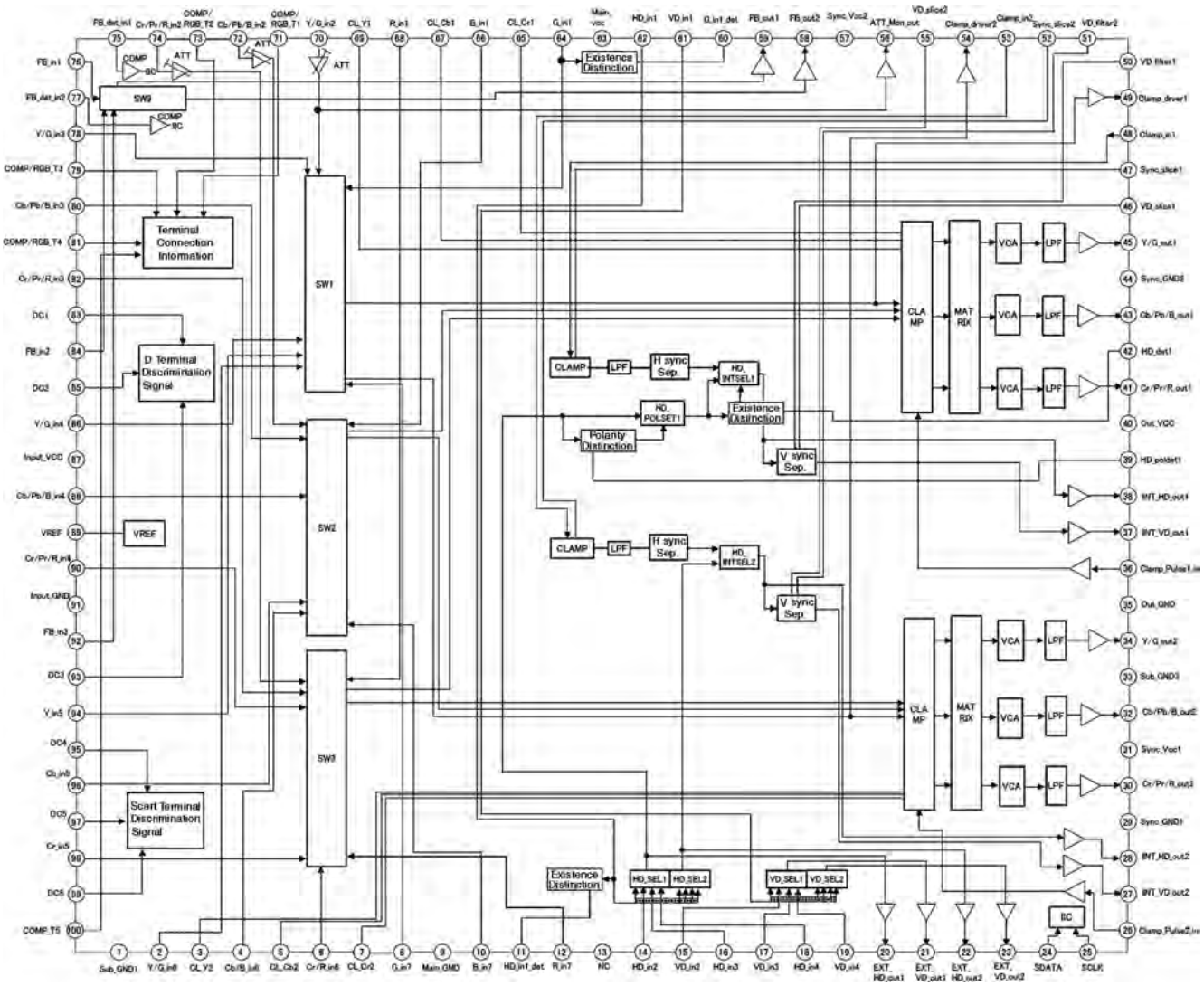
● **Block Diagram**



■ R2S11001FT (MR MAIN ASSY: IC4702)

• Component SW IC

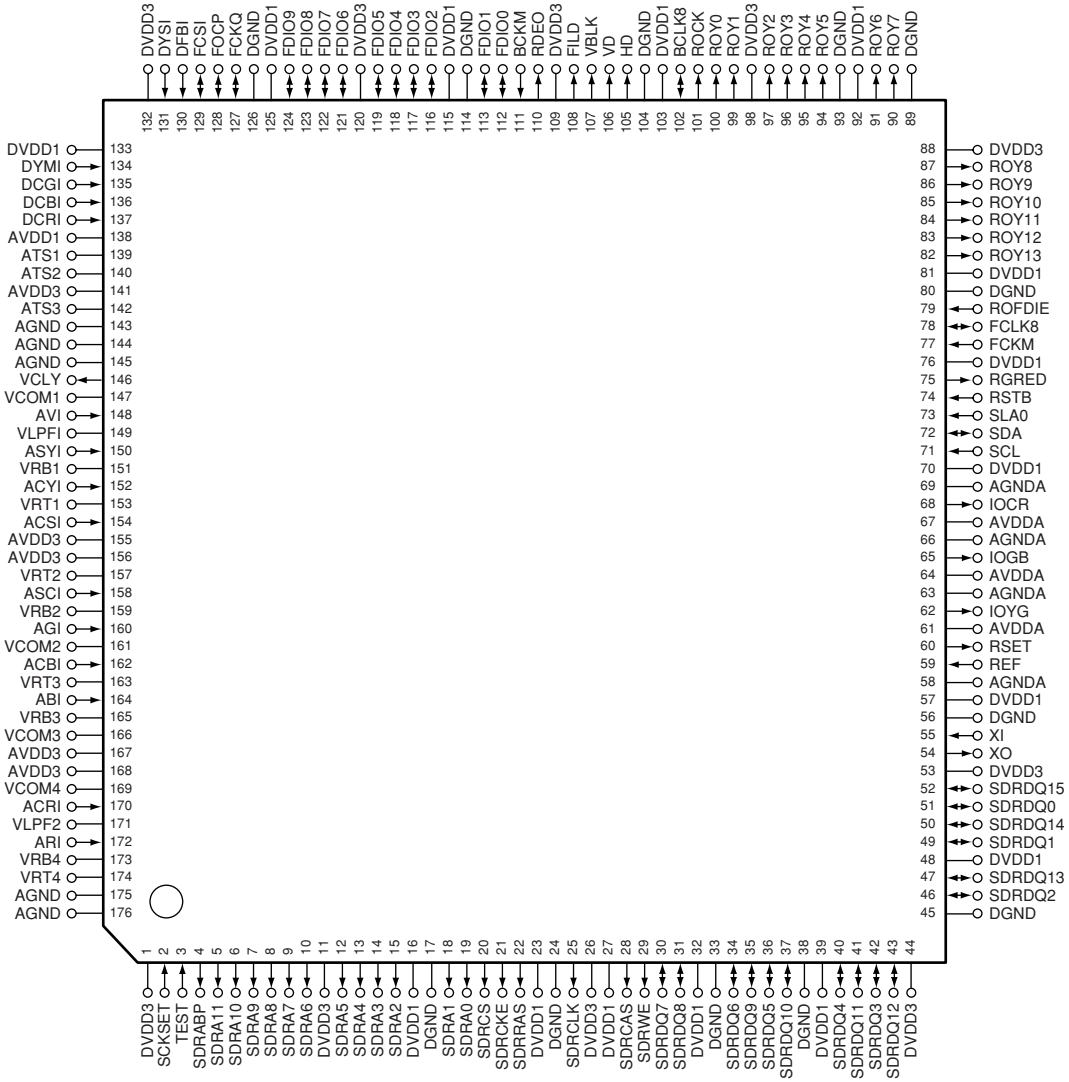
● Block Diagram



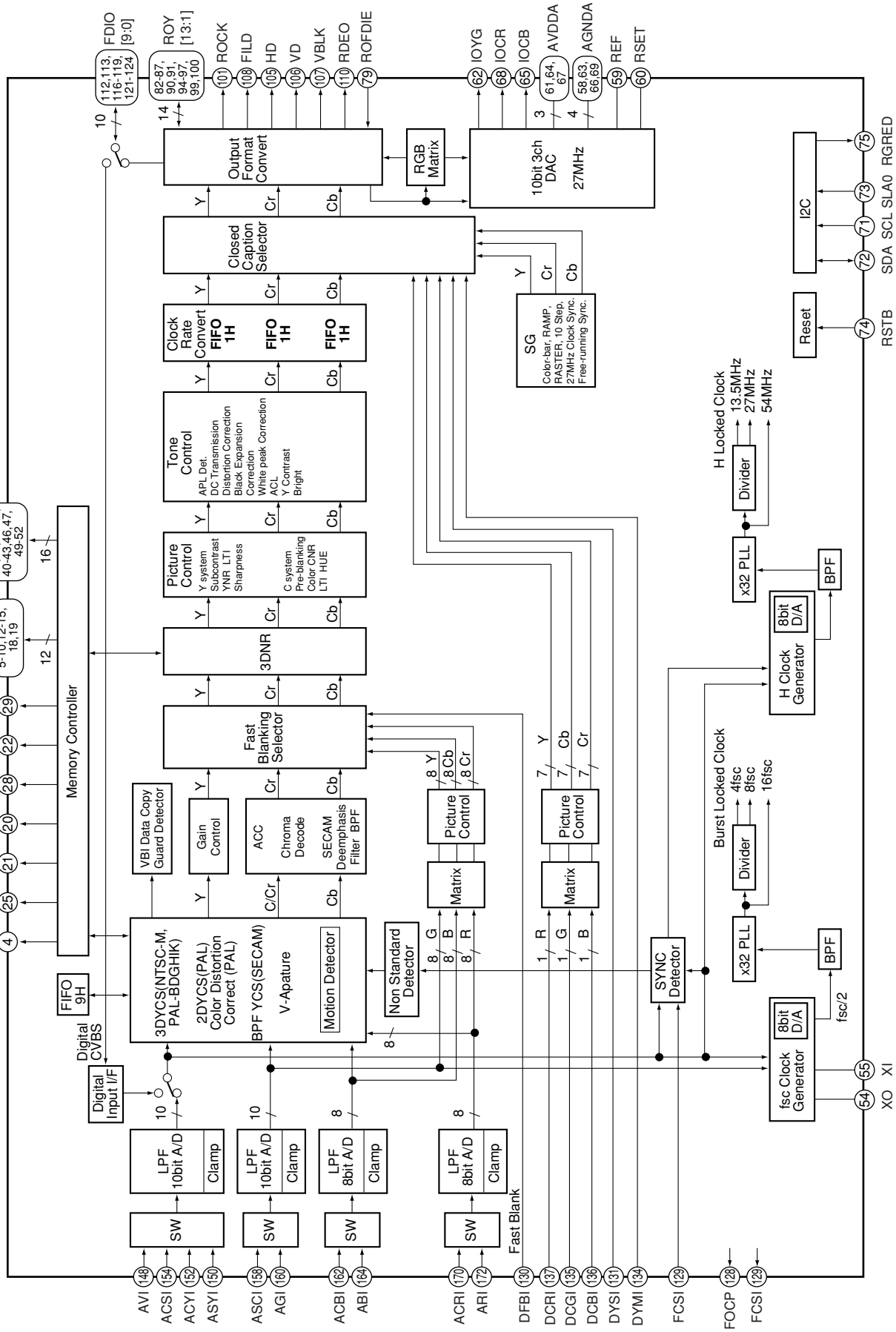
■ UPD64015GM-UEU (MR MAIN ASSY : IC6003)

• Video Decoder (for main screen)

● Pin Arrangement (Top view)



● Block Diagram



● **Pin Function**

No.	Pin Name	I/O	Pin Function
1	DVDD3	–	Digital power supply (3.3V)
2	SCKSET	I	Test mode selection (L: Normal, H: Test mode)
3	TEST	I	Test setting (L: Normal, H: Test mode)
4	SDRABP	O	All bank precharge output for external memory (Active High)
5	SDRA11	O	Address output for external memory
6	SDRA10	O	Address output for external memory
7	SDRA9	O	Address output for external memory
8	SDRA8	O	Address output for external memory
9	SDRA7	O	Address output for external memory
10	SDRA6	O	Address output for external memory
11	DVDD3	–	Digital power supply (3.3V)
12	SDRA5	O	Address output for external memory
13	SDRA4	O	Address output for external memory
14	SDRA3	O	Address output for external memory
15	SDRA2	O	Address output for external memory
16	DVDD1	–	Digital power supply (1.5V)
17	DGND	–	Digital ground
18	SDRA1	O	Address output for external memory
19	SDRA0	O	Address output for external memory
20	SDRCS	O	Chip select output for external memory (Active Low)
21	SDRCKE	O	Clock enable output for external memory (Active High)
22	SDRRAS	O	Row address strobe output for external memory (Active Low)
23	DVDD1	–	Digital power supply (1.5V)
24	DGND	–	Digital ground
25	SDRCLK	O	Clock output for external memory
26	DVDD3	–	Digital power supply (3.3V)
27	DVDD1	–	Digital power supply (1.5V)
28	SDRCAS	O	Column address strobe output for external memory (Active Low)
29	SDRWE	O	Write enable output for external memory (Active Low)
30	SDRDQ7	I/O	Data input/output for external memory
31	SDRDQ8	I/O	Data input/output for external memory
32	DVDD1	–	Digital power supply (1.5V)
33	DGND	–	Digital ground
34	SDRDQ6	I/O	Data input/output for external memory
35	SDRDQ9	I/O	Data input/output for external memory
36	SDRDQ5	I/O	Data input/output for external memory
37	SDRDQ10	I/O	Data input/output for external memory
38	DGND	–	Digital ground
39	DVDD1	–	Digital power supply (1.5V)
40	SDRDQ4	I/O	Data input/output for external memory
41	SDRDQ11	I/O	Data input/output for external memory
42	SDRDQ3	I/O	Data input/output for external memory
43	SDRDQ12	I/O	Data input/output for external memory
44	DVDD3	–	Digital power supply (3.3V)
45	DGND	–	Digital ground
46	SDRDQ2	I/O	Data input/output for external memory
47	SDRDQ13	I/O	Data input/output for external memory
48	DVDD1	–	Digital power supply (1.5V)
49	SDRDQ1	I/O	Data input/output for external memory
50	SDRDQ14	I/O	Data input/output for external memory

No.	Pin Name	I/O	Pin Function
51	SDRDQ0	I/O	Data input/output for external memory
52	SDRDQ15	I/O	Data input/output for external memory
53	DVDD3	–	Digital power supply (3.3V)
54	XO	O	Reference clock output Connect a 24.576MHz crystal.
55	XI	I	Reference clock input Connect a 24.576MHz crystal.
56	DGND	–	Digital ground
57	DVDD1	–	Digital power supply (1.5V)
58	AGNDA	–	Analog ground for DAC
59	REF	I	External reference input
60	RSET	O	Connect a 620 ohm resistor for external adjustment to AGND
61	AVDDA	–	Analog power supply for DAC (3.3V)
62	IOYG	O	Color-difference component Y / RGB component G output signal
63	AGNDA	–	Analog ground for DAC
64	AVDDA	–	Analog power supply for DAC (3.3V)
65	IOGB	O	Color-difference component Cb / RGB component B output signal
66	AGNDA	–	Analog ground for DAC
67	AVDDA	–	Analog power supply for DAC (3.3V)
68	IOCR	O	Color-difference component Cr / RGB component R output signal
69	AGNDA	–	Analog ground for DAC
70	DVDD1	–	Digital power supply (1.5V)
71	SCL	I	I^2C bus clock input Connect to SCL line of the system.
72	SDA	I/O	I^2C bus data input/output Connect to SDA line of the system.
73	SLA0	I	I^2C bus slave address select input (L: B8h/B9h, H: BAh/BBh)
74	RSTB	I	System reset input (Active Low)
75	RGRED	O	I^2C register read flag output (Active Low)
76	DVDD1	–	Digital power supply (1.5V)
77	FCKM	I	FCLK8 test mode selection (L: Normal, H: Test mode)
78	FCLK8	I/O	Line-lock clock monitor input/output
79	ROFDIE	I	Output enable of the video input/output terminal L: Output terminal Hi-Z, H: Output enable
80	DGND	–	Digital ground
81	DVDD1	–	Digital power supply (1.5V)
82	ROY13	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
83	ROY12	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
84	ROY11	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
85	ROY10	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
86	ROY9	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
87	ROY8	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
88	DVDD3	–	Digital power supply (3.3V)
89	DGND	–	Digital ground
90	ROY7	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
91	ROY6	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
92	DVDD1	–	Digital power supply (1.5V)
93	DGND	–	Digital ground
94	ROY5	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
95	ROY4	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
96	ROY3	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
97	ROY2	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
98	DVDD3	–	Digital power supply (3.3V)
99	ROY1	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output
100	ROY0	O	Digital ITU-R BT. 656/component output Digital RGB component (8 bit) output

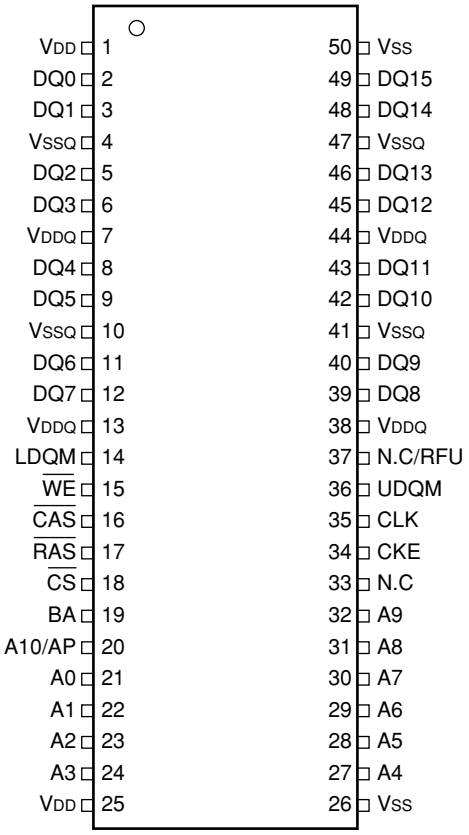
No.	Pin Name	I/O	Pin Function
101	ROCK	O	Clock for digital ITU-R BT. 656/component output
102	BCLK8	I/O	Line-lock clock monitor input/output
103	DVDD1	–	Digital power supply (1.5V)
104	DGND	–	Digital ground
105	HD	O	Horizontal sync. signal output
106	VD	O	Vertical sync. signal output
107	VBLK	O	V blanking output
108	FILD	O	Field output
109	DVDD3	–	Digital power supply (3.3V)
110	RDEO	O	Effective pixel area output
111	BCKM	I	Test mode selection of BCLK8 pin (L: Normal, H: Test mode)
112	FDIO0	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
113	FDIO1	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
114	DGND	–	Digital ground
115	DVDD1	–	Digital power supply (1.5V)
116	FDIO2	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
117	FDIO3	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
118	FDIO4	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
119	FDIO5	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
120	DVDD3	–	Digital power supply (3.3V)
121	FDIO6	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
122	FDIO7	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
123	FDIO8	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
124	FDIO9	I/O	Digital 8/10 bit Cb, Cr output / Input at UPD64031A digital connection Open at no use.
125	DVDD1	–	Digital power supply (1.5V)
126	DGND	–	Digital ground
127	FCKQ	I/O	Sampling clock output for digital connection
128	FOCP	I/O	Clamp pulse output for digital connection / Timing output for digital RGB input (VD)
129	FCSI	I/O	Sync sep. signal input / Timing output for RGB input (HD)
130	DFBI	I	Fast blanking signal input for analog RGB input
131	DYSI	I	YS signal input for digital RGB input
132	DVDD3	–	Digital power supply (3.3V)
133	DVDD1	–	Digital power supply (1.5V)
134	DYMI	I	YM signal input for digital RGB input
135	DCGI	I	Digital RGB/G signal input
136	DCBI	I	Digital RGB/B signal input
137	DCRI	I	Digital RGB/R signal input
138	AVDD1	–	Analog power supply (1.5V)
139	ATS1	–	Analog test input Normally, connect to GND.
140	ATS2	–	Analog test input Normally, connect to GND.
141	AVDD3	–	Analog power supply (3.3V)
142	ATS3	–	Analog test input Normally, connect to GND.
143	AGND	–	Analog ground
144	AGND	–	Analog ground
145	AGND	–	Analog ground
146	VCLY	O	ADC1 clamp voltage
147	VCOM1	–	ADC1 common-mode reference voltage
148	AVI	I	ADC1 composite/Y signal input
149	VLPFI	–	Analog test output Connect to GND via 0.1μF capacitor.
150	ASYI	I	ADC1 composite/Y signal input

No.	Pin Name	I/O	Pin Function
151	VRB1	–	ADC1 bottom reference voltage
152	ACYI	I	ADC1 composite/Y signal input
153	VRT1	–	ADC1 top reference voltage
154	ACSI	I	ADC1 composite/Y signal input
155	AVDD3	–	Analog power supply for ADC (3.3V)
156	AVDD3	–	Analog power supply for ADC (3.3V)
157	VRT2	–	ADC2 top reference voltage
158	ASCI	I	ADC2 separate C signal input
159	VRB2	–	ADC2 bottom reference voltage
160	AGI	I	ADC2 RGB component G signal input
161	VCOM2	–	ADC2 common-mode reference voltage
162	ACBI	I	ADC3 color-difference component Cb signal input
163	VRT3	–	ADC3 top reference voltage
164	ABI	I	ADC3 RGB component B signal input
165	VRB3	–	ADC3 bottom reference voltage
166	VCOM3	–	ADC3 common-mode reference voltage
167	AVDD3	–	Analog power supply for ADC (3.3V)
168	AVDD3	–	Analog power supply for ADC (3.3V)
169	VCOM4	–	ADC4 common-mode reference voltage
170	ACRI	I	ADC4 color-difference component Cr signal input
171	VLPF2	–	Analog test output
172	ARI	I	ADC3 RGB component R signal input
173	VRB4	–	ADC4 bottom reference voltage
174	VRT4	–	ADC4 top reference voltage
175	AGND	–	Analog ground
176	AGND	–	Analog ground

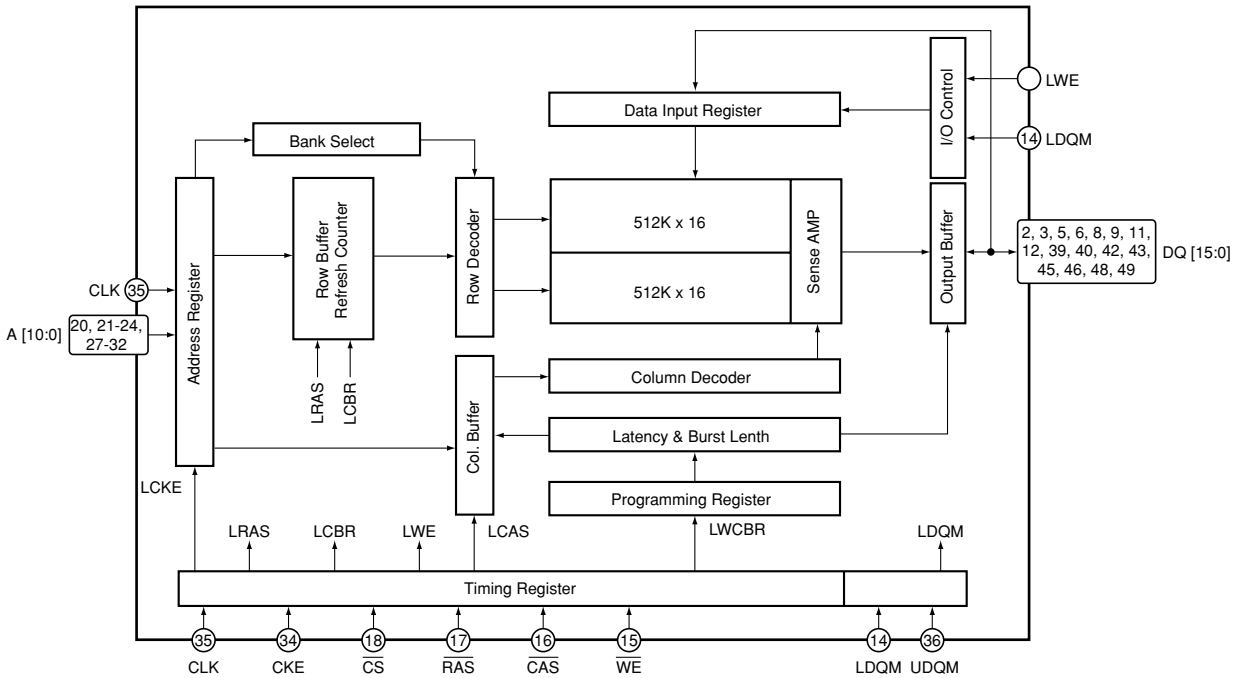
K4S161622H-TC60 (MR MAIN ASSY : IC6002)

• 16M SDRAM (for Main VDEC)

● Pin Arrangement (Top view)



● Block Diagram



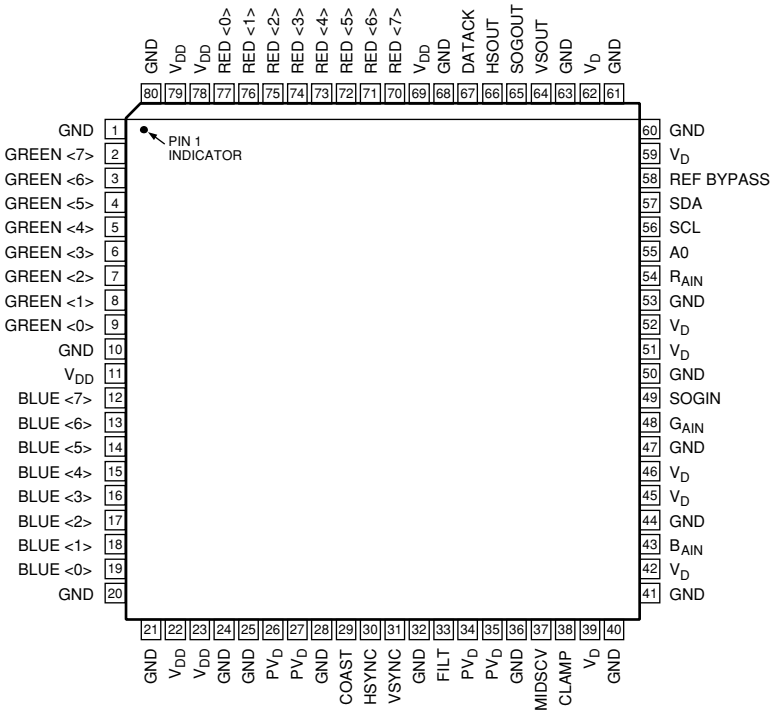
● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	V_{DD}	–	Power supply	26	V_{SS}	–	Ground
2	DQ0	I/O	Data input / output	27	A4	I	Address input
3	DQ1	I/O	Data input / output	28	A5	I	Address input
4	V_{SSQ}	–	Ground for data output	29	A6	I	Address input
5	DQ2	I/O	Data input / output	30	A7	I	Address input
6	DQ3	I/O	Data input / output	31	A8	I	Address input
7	V_{DDQ}	–	Power supply for data output	32	A9	I	Address input
8	DQ4	I/O	Data input / output	33	N.C	–	No connection
9	DQ5	I/O	Data input / output	34	CKE	I	Clock enable input
10	V_{SSQ}	–	Ground for data output	35	CLK	I	System clock input
11	DQ6	I/O	Data input / output	36	UDQM	I	Data input / output mask input
12	DQ7	I/O	Data input / output	37	N.C/RFU	–	No connection / Reserved for future use
13	V_{DDQ}	–	Power supply for data output	38	V_{DDQ}	–	Power supply for data output
14	LDQM	I	Data input / output mask input	39	DQ8	I/O	Data input / output
15	$\overline{WE}$	I	Write enable input	40	DQ9	I/O	Data input / output
16	$\overline{CAS}$	I	Column address strobe input	41	V_{SSQ}	–	Ground for data output
17	$\overline{RAS}$	I	Row address strobe input	42	DQ10	I/O	Data input / output
18	$\overline{CS}$	I	Chip select input	43	DQ11	I/O	Data input / output
19	BA	I	Bank select address input	44	V_{DDQ}	–	Power supply for data output
20	A10/AP	I	Address input	45	DQ12	I/O	Data input / output
21	A0	I	Address input	46	DQ13	I/O	Data input / output
22	A1	I	Address input	47	V_{SSQ}	–	Ground for data output
23	A2	I	Address input	48	DQ14	I/O	Data input / output
24	A3	I	Address input	49	DQ15	I/O	Data input / output
25	V_{DD}	–	Power supply	50	V_{SS}	–	Ground

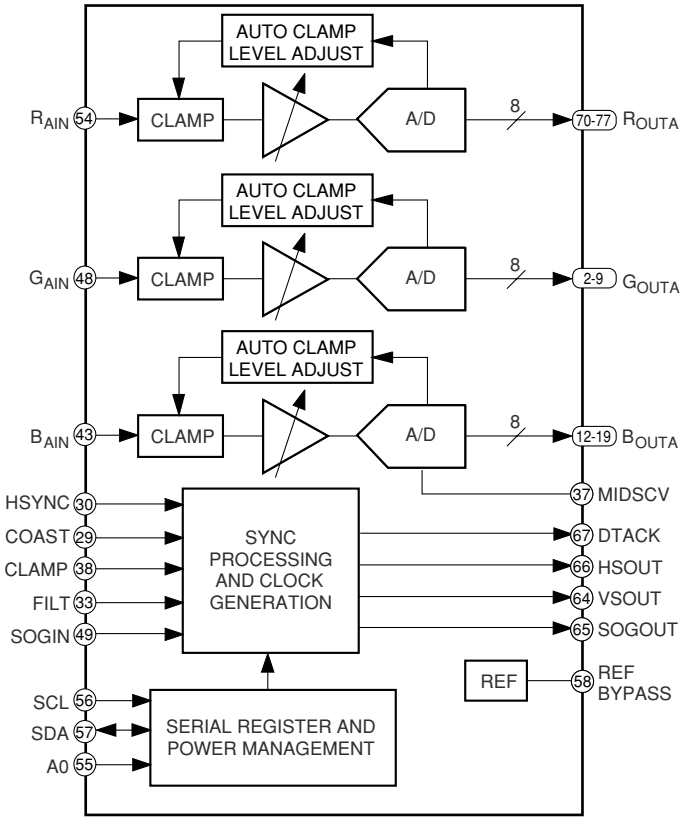
■ AD9985KSTZ-110 (MR MAIN ASSY : IC6201)

• ADC

● Pin Arrangement (Top view)



● Block Diagram



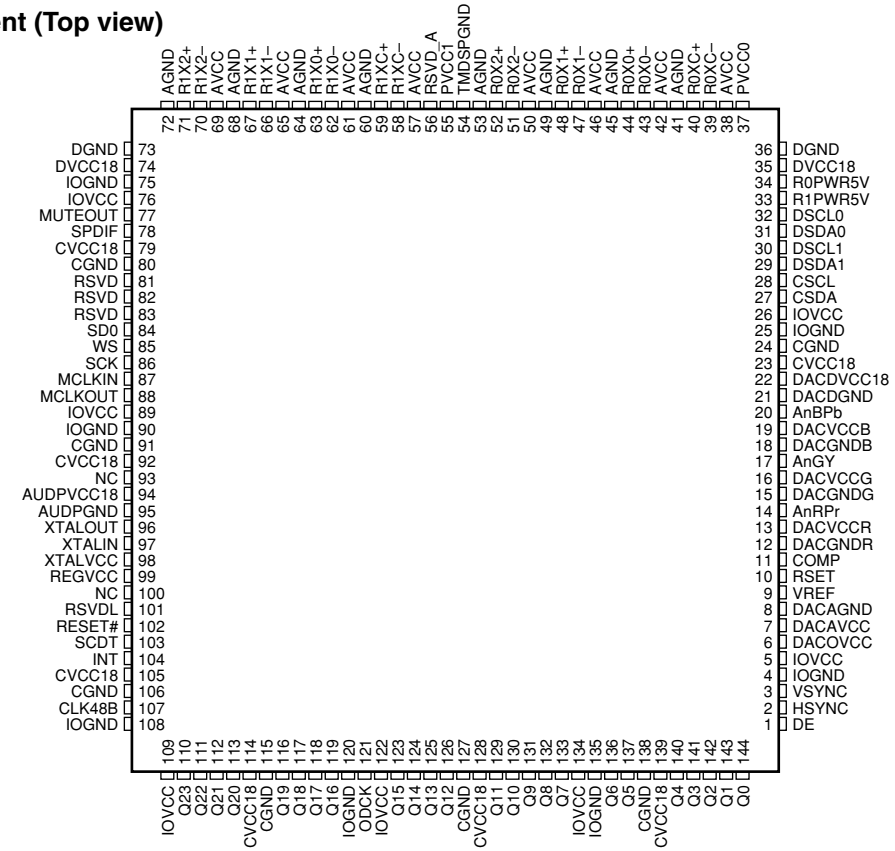
● Pin Function

Pin Type	No.	PIN Name	Pin Function
Inputs	54	RAIN	Analog input for converter R
	48	GAIN	Analog input for converter G
	43	BAIN	Analog input for converter B
	30	HSYNC	Horizontal sync input
	31	VSYNC	Vertical sync input
	49	SOGIN	Input for sync-on green
	38	CLAMP	Clamp input (External CLAMP signal)
	29	COAST	PLL COAST signal input
Outputs	70-77	Red [7 : 0]	Outputs of converter red, bit 7 is the MSB
	2-9	Green [7 : 0]	Outputs of converter green, bit 7 is the BSB
	12-19	Blue [7 : 0]	Outputs of converter blue, bit 7 is the BSB
	67	DATACK	Data output clock
	66	HSOUT	HSYNC output (Phase-aligned with DATACK)
	64	VSOUT	VSYNC output (Phase-aligned with DATACK)
	65	SOGOUT	Sync-on-green slicer output
Reference	58	REF BYPASS	Internal reference bypass
	37	MIDSCV	Internal midscale voltage bypass
	33	FILT	Connection for external filter components for internal PLL
Power Supply	39, 42, 45, 46, 51, 52, 59, 62	VD	Analog power supply
	11, 22, 23, 69, 78, 79	VDD	Output power supply
	26, 27, 34, 35	PVD	PLL power supply
	1, 10, 20, 21, 24, 25, 28, 32, 36, 40, 41, 44, 47, 50, 53, 60, 61, 63 68, 80	GND	Ground
Control	57	SDA	Serial port data I/O
	56	SCL	Serial port data clock (100 kHz maximum)
	55	A0	Serial port address input 1

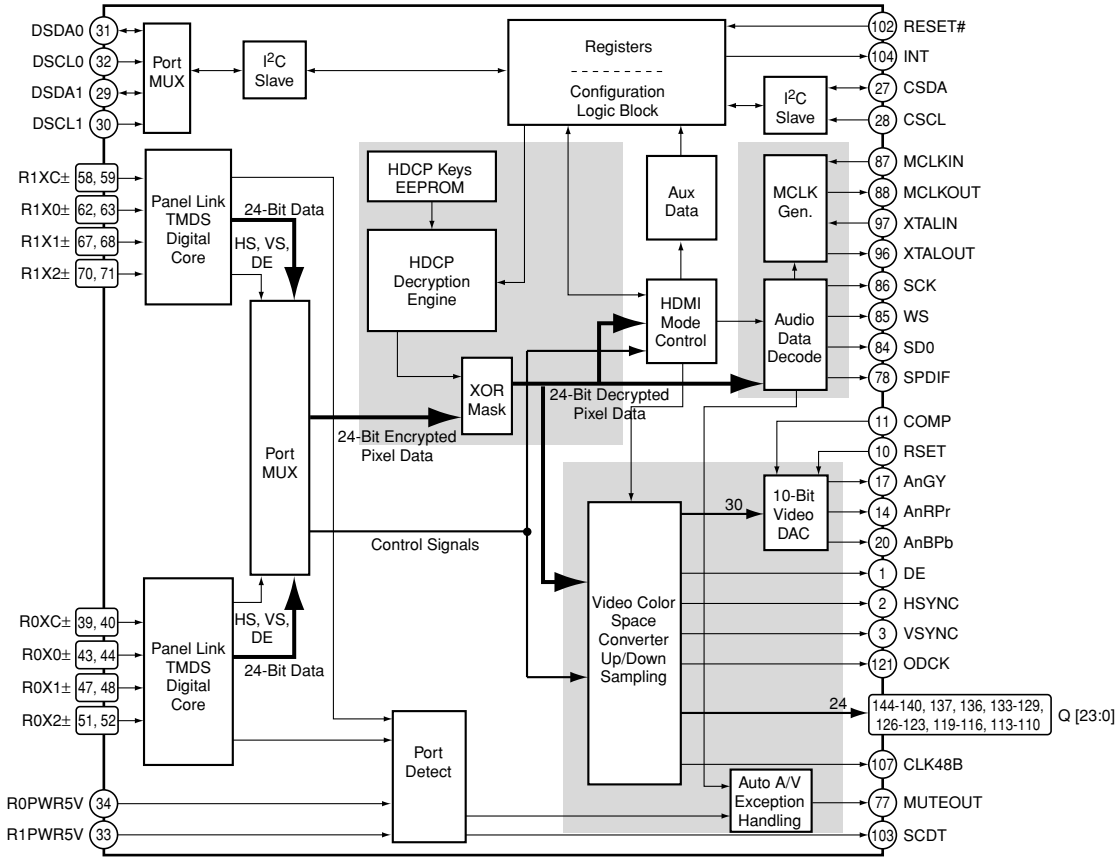
SII9021CTU (MR MAIN ASSY : IC6404)

• HDMI Rx

● Pin Arrangement (Top view)



● Block Diagram



● Pin Function

No.	Pin Name	I/O	Pin Function
1	DE	O	Data enable
2	HSYNC	O	Horizontal sync output control signal
3	VSYNC	O	Vertical sync output control signal
4	IOGND	–	Input / output pin ground
5	IOVCC	–	Input / output pin VCC
6	DACOVCC	–	DAC output VCC
7	DACAVCC	–	DAC analog VCC
8	DACAGND	–	DAC analog ground
9	VREF	–	–
10	RSET	–	Full scale adjust resistor
11	COMP	–	Compensation
12	DACGNDR	–	DAC red ground
13	DACVCCR	–	DAC red VDD
14	AnRPr	O	Analog video red, Pr output
15	DACGNDG	–	DAC green ground
16	DACVCCG	–	DAC green VDD
17	AnGY	O	Analog video green, Y output
18	DACGNDB	–	DAC blue ground
19	DACVCCB	–	DAC blue VDD
20	AnBPb	O	Analog video blue, Pb output
21	DACDGND	–	DAC digital ground
22	DACDVCC18	–	DAC digital VCC
23	CVCC18	–	Digital logic VCC
24	CGND	–	Digital logic ground
25	IOGND	–	Input / output pin ground
26	IOVCC	–	Input / output pin VCC
27	CSDA	I/O	Configuration I^2C data
28	CSCL	I	Configuration I^2C clock
29	DSDA1	I/O	DDC I^2C data for port 1
30	DSCL1	I	DDC I^2C clock for port 1
31	DSDA0	I/O	DDC I^2C data for port 0
32	DSCL0	I	DDC I^2C clock for port 0
33	R1PWR5V	I	Port 1 transmitter detect
34	R0PWR5V	I	Port 0 transmitter detect
35	DVCC18	–	ACR PLL digital VCC
36	DGND	–	ACR PLL ground
37	PVCC0	–	TMDS port 0 PLL VCC
38	AVCC	–	TMDS analog VCC
39	R0XC–	I	TMDS input clock
40	R0XC+	I	TMDS input clock
41	AGND	–	TMDS analog ground
42	AVCC	–	TMDS analog VCC
43	R0X0–	I	TMDS input data
44	R0X0+	I	TMDS input data
45	AGND	–	TMDS analog ground
46	AVCC	–	TMDS analog VCC
47	R0X1–	I	TMDS input data
48	R0X1+	I	TMDS input data
49	AGND	–	TMDS analog ground
50	AVCC	–	TMDS analog VCC

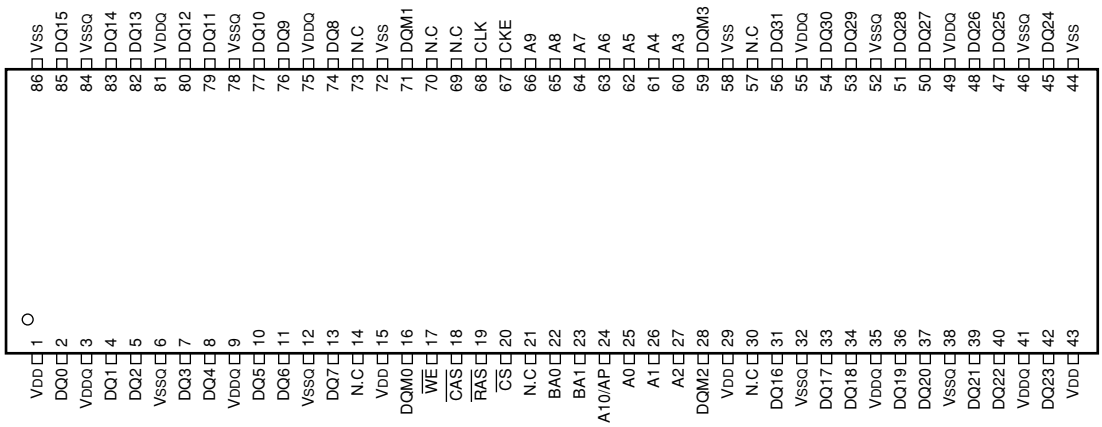
No.	Pin Name	I/O	Pin Function
51	R0X2–	I	TMDS input data
52	R0X2+	I	TMDS input data
53	AGND	–	TMDS analog ground
54	TMDSPGND	–	TMDS PLL ground
55	PVCC1	–	TMDS port 1 PLL VCC
56	RSVD_A	–	Reserved pin
57	AVCC	–	TMDS analog VCC
58	R1XC–	I	TMDS input clock
59	R1XC+	I	TMDS input clock
60	AGND	–	TMDS analog ground
61	AVCC	–	TMDS analog VCC
62	R1X0–	I	TMDS input data
63	R1X0+	I	TMDS input data
64	AGND	–	TMDS analog ground
65	AVCC	–	TMDS analog VCC
66	R1X1–	I	TMDS input data
67	R1X1+	I	TMDS input data
68	AGND	–	TMDS analog ground
69	AVCC	–	TMDS analog VCC
70	R1X2–	I	TMDS input data
71	R1X2+	I	TMDS input data
72	AGND	–	TMDS analog ground
73	DGND	–	ACR PLL ground
74	DVCC18	–	ACR PLL digital VCC
75	IOGND	–	Input / output pin ground
76	IOVCC	–	Input / output pin VCC
77	MUTEOUT	O	Mute audio output
78	SPDIF	O	S/PDIF audio output
79	CVCC18	–	Digital logic VCC
80	CGND	–	Digital logic ground
81	RSVD	O	–
82	RSVD	O	–
83	RSVD	O	–
84	SD0	O	I^2S serial data output
85	WS	O	I^2S word select output
86	SCK	O	I^2S serial clock output
87	MCLKIN	I	Audio master clock input reference
88	MCLKOUT	O	Audio master clock output
89	IOVCC	–	Input / output pin VCC
90	IOGND	–	Input / output pin ground
91	CGND	–	Digital logic ground
92	CVCC18	–	Digital logic VCC
93	NC	–	No connection
94	AUDPVCC18	–	ACR PLL VCC
95	AUDPGND	–	ACR PLL ground
96	XTALOUT	O	Crystal clock output
97	XTALIN	I	Crystal clock input
98	XTALVCC	–	ACR PLL crystal input VCC
99	REGVCC	–	ACR PLL regulator VCC
100	NC	–	No connection

No.	Pin Name	I/O	Pin Function
101	RSVDL	I	Reserved, must be tied LOW
102	RESET#	I	Reset pin, active LOW
103	SCDT	O	Indicates active video at HDMI input port
104	INT	O	Interrupt output
105	CVCC18	–	Digital logic VCC
106	CGND	–	Digital logic ground
107	CLK48B	I/O	Data bus latch enable
108	IOGND	–	Input / output pin ground
109	IOVCC	–	Input / output pin VCC
110	Q23	O	24-bit output pixel data bus
111	Q22	O	24-bit output pixel data bus
112	Q21	O	24-bit output pixel data bus
113	Q20	O	24-bit output pixel data bus
114	CVCC18	–	Digital logic VCC
115	CGND	–	Digital logic ground
116	Q19	O	24-bit output pixel data bus
117	Q18	O	24-bit output pixel data bus
118	Q17	O	24-bit output pixel data bus
119	Q16	O	24-bit output pixel data bus
120	IOGND	–	Input / output pin ground
121	ODCK	O	Output data clock
122	IOVCC	–	Input / output pin VCC
123	Q15	O	24-bit output pixel data bus
124	Q14	O	24-bit output pixel data bus
125	Q13	O	24-bit output pixel data bus
126	Q12	O	24-bit output pixel data bus
127	CGND	–	Digital logic ground
128	CVCC18	–	Digital logic VCC
129	Q11	O	24-bit output pixel data bus
130	Q10	O	24-bit output pixel data bus
131	Q9	O	24-bit output pixel data bus
132	Q8	O	24-bit output pixel data bus
133	Q7	O	24-bit output pixel data bus
134	IOVCC	–	Input / output pin VCC
135	IOGND	–	Input / output pin ground
136	Q6	O	24-bit output pixel data bus
137	Q5	O	24-bit output pixel data bus
138	CGND	–	Digital logic ground
139	CVCC18	–	Digital logic VCC
140	Q4	O	24-bit output pixel data bus
141	Q3	O	24-bit output pixel data bus
142	Q2	O	24-bit output pixel data bus
143	Q1	O	24-bit output pixel data bus
144	Q0	O	24-bit output pixel data bus

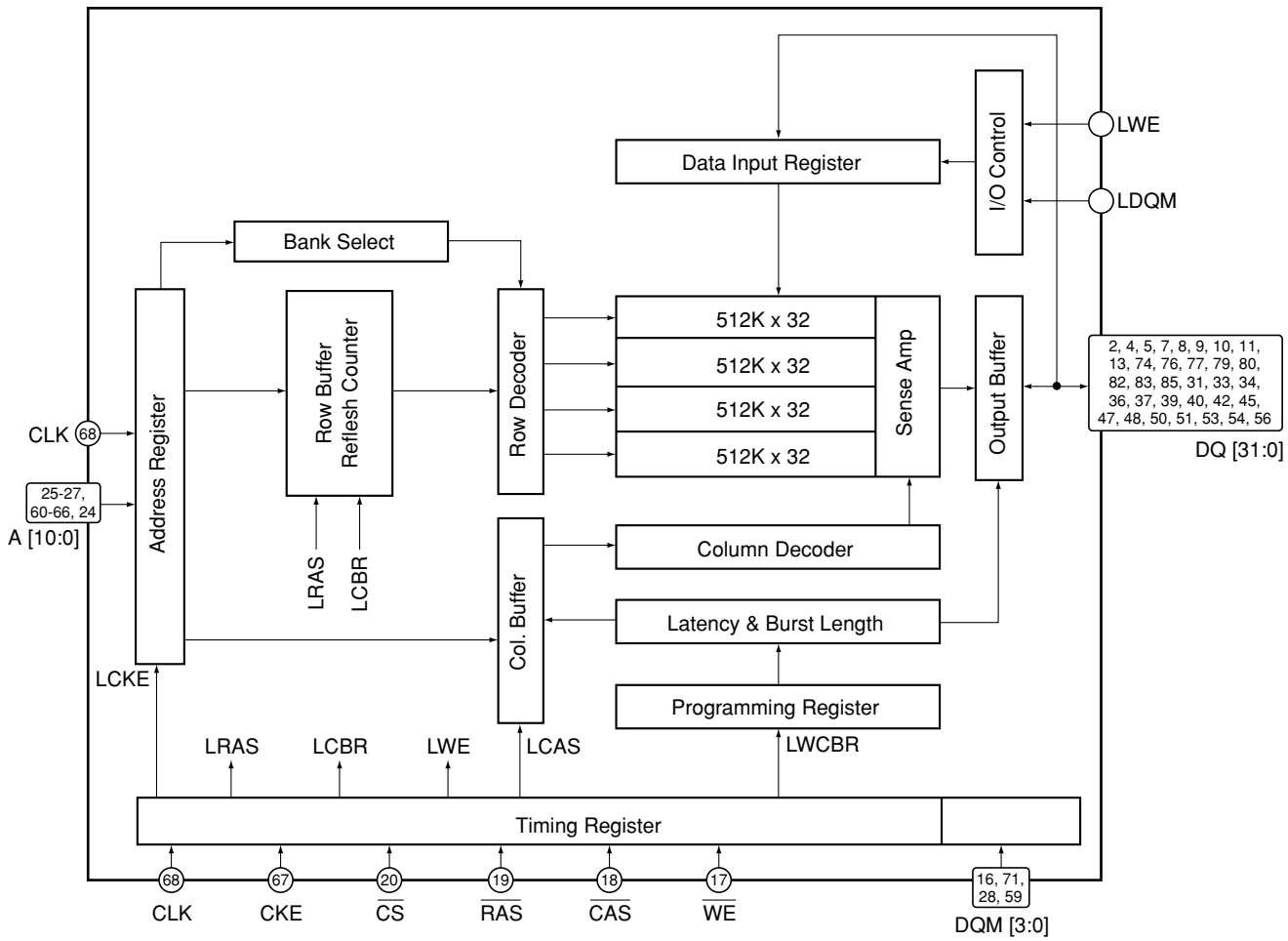
K4S643232H-TC60 (MR MAIN ASSY : IC6801, IC6802)

• 64M SDRAM (for Silvia)

● Pin Arrangement (Top view)



● Block Diagram



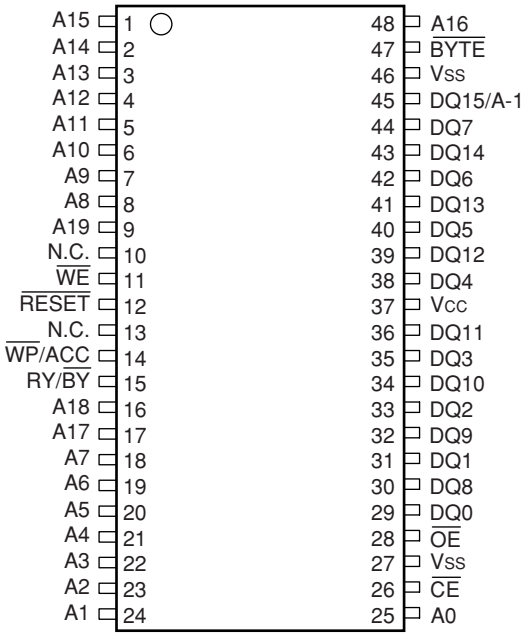
● Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	V_{DD}	–	Power supply	44	V_{SS}	–	Ground
2	DQ0	I/O	Data input / output	45	DQ24	I/O	Data input / output
3	V_{DDQ}	–	Power supply for data output	46	V_{SSQ}	–	Ground for data output
4	DQ1	I/O	Data input / output	47	DQ25	I/O	Data input / output
5	DQ2	I/O	Data input / output	48	DQ26	I/O	Data input / output
6	V_{SSQ}	–	Ground for data output	49	V_{DDQ}	–	Power supply for data output
7	DQ3	I/O	Data input / output	50	DQ27	I/O	Data input / output
8	DQ4	I/O	Data input / output	51	DQ28	I/O	Data input / output
9	V_{DDQ}	–	Power supply for data output	52	V_{SSQ}	–	Ground for data output
10	DQ5	I/O	Data input / output	53	DQ29	I/O	Data input / output
11	DQ6	I/O	Data input / output	54	DQ30	I/O	Data input / output
12	V_{SSQ}	–	Ground for data output	55	V_{DDQ}	–	Power supply for data output
13	DQ7	I/O	Data input / output	56	DQ31	I/O	Data input / output
14	N.C	–	No connection	57	N.C	–	No connection
15	V_{DD}	–	Power supply	58	V_{SS}	–	Ground
16	DQM0	I	Data input / output mask input	59	DQM3	I	Data input / output mask input
17	$\overline{WE}$	I	Write enable input	60	A3	I	Address input
18	$\overline{CAS}$	I	Column address strobe input	61	A4	I	Address input
19	$\overline{RAS}$	I	Row address strobe input	62	A5	I	Address input
20	$\overline{CS}$	I	Chip select input	63	A6	I	Address input
21	N.C	–	No connection	64	A7	I	Address input
22	BA0	I	Bank select address input	65	A8	I	Address input
23	BA1	I	Bank select address input	66	A9	I	Address input
24	A10/AP	I	Address input	67	CKE	I	Clock enable input
25	A0	I	Address input	68	CLK	I	System clock input
26	A1	I	Address input	69	N.C	–	No connection
27	A2	I	Address input	70	N.C	–	No connection
28	DQM2	I	Data input / output mask input	71	DQM1	I	Data input / output mask input
29	V_{DD}	–	Power supply	72	V_{SS}	–	Ground
30	N.C	–	No connection	73	N.C	–	No connection
31	DQ16	I/O	Data input / output	74	DQ8	I/O	Data input / output
32	V_{SSQ}	–	Ground for data output	75	V_{DDQ}	–	Power supply for data output
33	DQ17	I/O	Data input / output	76	DQ9	I/O	Data input / output
34	DQ18	I/O	Data input / output	77	DQ10	I/O	Data input / output
35	V_{DDQ}	–	Power supply for data output	78	V_{SSQ}	–	Ground for data output
36	DQ19	I/O	Data input / output	79	DQ11	I/O	Data input / output
37	DQ20	I/O	Data input / output	80	DQ12	I/O	Data input / output
38	V_{SSQ}	–	Ground for data output	81	V_{DDQ}	–	Power supply for data output
39	DQ21	I/O	Data input / output	82	DQ13	I/O	Data input / output
40	DQ22	I/O	Data input / output	83	DQ14	I/O	Data input / output
41	V_{DDQ}	–	Power supply for data output	84	V_{SSQ}	–	Ground for data output
42	DQ23	I/O	Data input / output	85	DQ15	I/O	Data input / output
43	V_{DD}	–	Power supply	86	V_{SS}	–	Ground

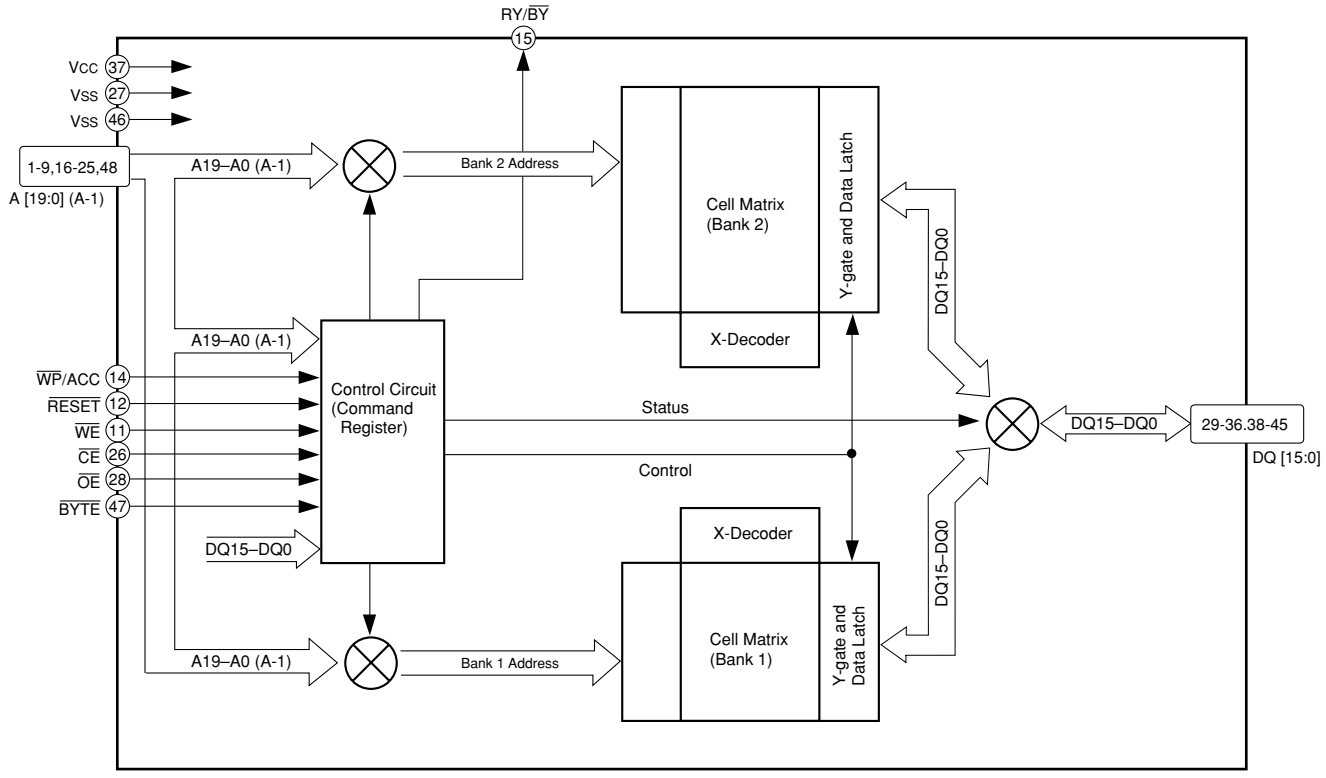
MBM29DL162TE70TN (MR MAIN ASSY : IC5207, IC7002)

• 16M Flash for Carrera MANTA

● Pin Arrangement (Top view)



● Block Diagram



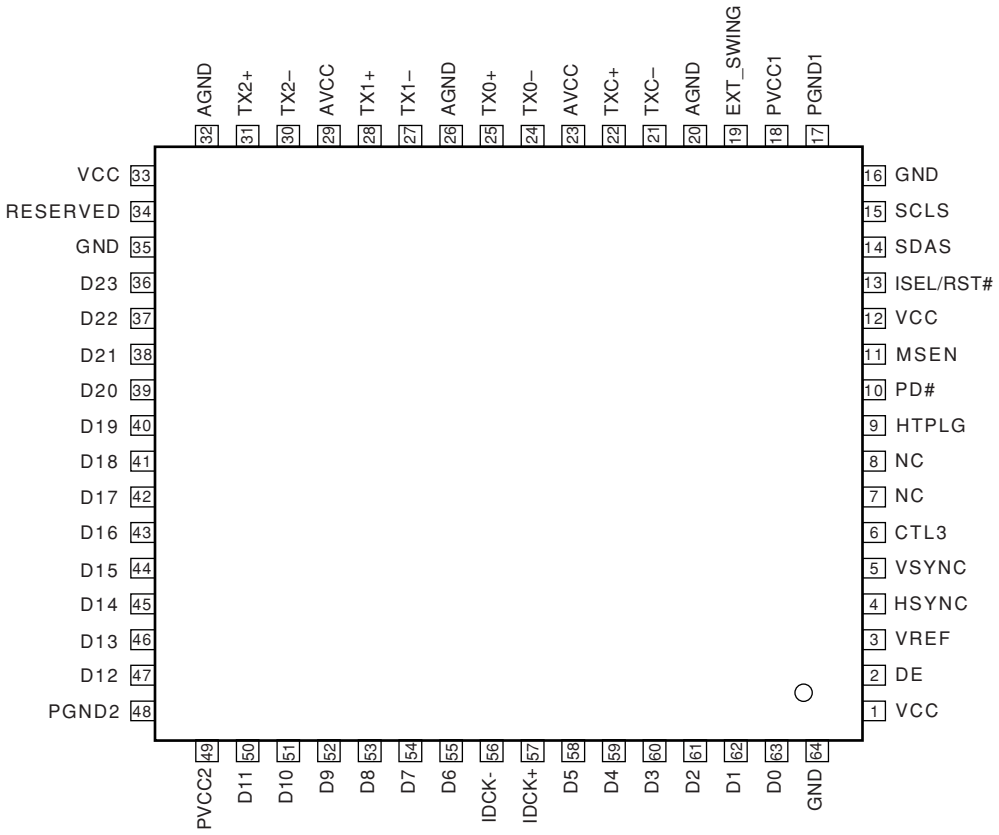
● **Pin Function**

No.	Pin Name	I/O	Pin Function
1	A15	I	Address input
2	A14	I	Address input
3	A13	I	Address input
4	A12	I	Address input
5	A11	I	Address input
6	A10	I	Address input
7	A9	I	Address input
8	A8	I	Address input
9	A19	I	Address input
10	N.C.	I	No connection
11	$\overline{WE}$	I	Write enable input
12	$\overline{RESET}$	I	Hardware reset
13	N.C.	–	No connection
14	$\overline{WP}$/ACC	I	Hardware write protect / Acceleration
15	RY/$\overline{BY}$	O	Ready / Busy output
16	A18	I	Address input
17	A17	I	Address input
18	A7	I	Address input
19	A6	I	Address input
20	A5	I	Address input
21	A4	I	Address input
22	A3	I	Address input
23	A2	I	Address input
24	A1	I	Address input
25	A0	I	Address input
26	$\overline{CE}$	I	Chip enable input
27	Vss	–	Ground
28	$\overline{OE}$	I	Output enable input
29	DQ0	I/O	Data input / output
30	DQ8	I/O	Data input / output
31	DQ1	I/O	Data input / output
32	DQ9	I/O	Data input / output
33	DQ2	I/O	Data input / output
34	DQ10	I/O	Data input / output
35	DQ3	I/O	Data input / output
36	DQ11	I/O	Data input / output
37	Vcc	–	Power supply
38	DQ4	I/O	Data input / output
39	DQ12	I/O	Data input / output
40	DQ5	I/O	Data input / output
41	DQ13	I/O	Data input / output
42	DQ6	I/O	Data input / output
43	DQ14	I/O	Data input / output
44	DQ7	I/O	Data input / output
45	DQ15/A-1	I/O	Data input / output / Address input
46	Vss	–	Ground
47	$\overline{BYTE}$	I	Selects 8-bit or 16-bit mode
48	A16	I	Address input

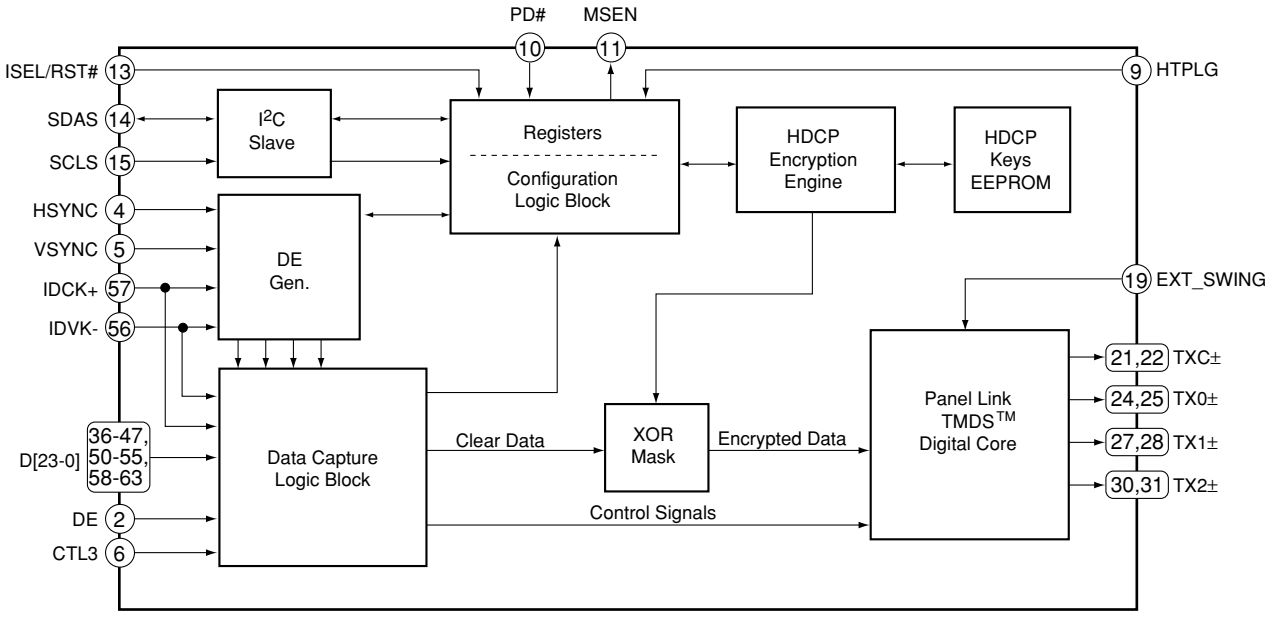
■ SII170BCLG64 (MR MAIN ASSY : IC7202)

• DVI Tx

● Pin Arrangement (Top view)



● Block Diagram



● Pin Function

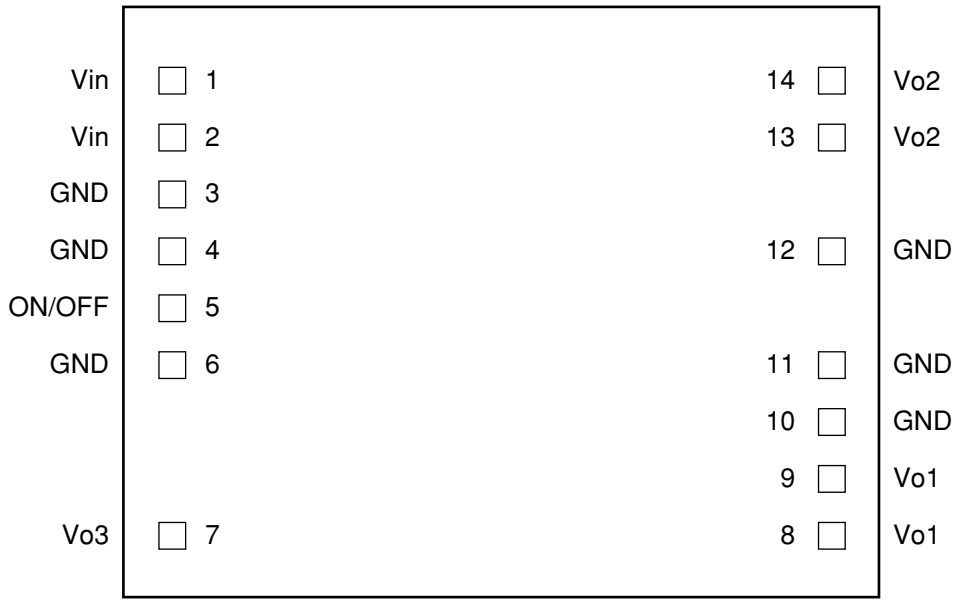
No.	Pin Name	I/O	Pin Function
1	VCC	–	Digital power supply (3.3V)
2	DE	I	Data enable
3	VREF	I	3.3V fixed
4	HSYNC	I	Horizontal sync. control signal input
5	VSYNC	I	Vertical sync. control signal input
6	CTL3	I	External CTL3 input
7	NC	–	No connection
8	NC	–	No connection
9	HTPLG	I	Monitor chrage input
10	PD#	I	Power down input (Active low)
11	MSEN	O	Monitor sense output (open-collector output)
12	VCC	–	Digital power supply (3.3V)
13	ISEL/RST#	I	I2C interface selecting input High: I2C interface is active
14	SDAS	I/O	DDC I2C data input/output
15	SCLS	I	DDC I2C clock input
16	GND	–	Digital ground
17	PGND1	–	PLL analog ground
18	PVCC1	–	Analog power supply for PLL of primary side (3.3V)
19	EXT_SWING	I	Voltage regulation adjustment
20	AGND	–	Analog ground
21	TXC–	O	Differential signal clock output of TMDS Low voltage
22	TXC+	O	Differential signal clock output of TMDS Low voltage
23	AVCC	–	Analog power supply (3.3V)
24	TX0–	O	Differential signal clock output of TMDS Low voltage
25	TX0+	O	Differential signal clock output of TMDS Low voltage
26	AGND	–	Analog ground
27	TX1–	O	Differential signal clock output of TMDS Low voltage
28	TX1+	O	Differential signal clock output of TMDS Low voltage
29	AVCC	–	Analog power supply (3.3V)
30	TX2-	O	Differential signal clock output of TMDS Low voltage
31	TX2+	O	Differential signal clock output of TMDS Low voltage
32	AGND	–	Analog ground
33	VCC	–	Digital power supply (3.3V)
34	RESERVED	I	Reserved pin for Silicon Image Normally, fixed to low.
35	GND	–	Digital ground
36	D23	I	24-bit pixel bus input
37	D22	I	24-bit pixel bus input
38	D21	I	24-bit pixel bus input
39	D20	I	24-bit pixel bus input
40	D19	I	24-bit pixel bus input

No.	Pin Name	I/O	Pin Function
41	D18	I	24-bit pixel bus input
42	D17	I	24-bit pixel bus input
43	D16	I	24-bit pixel bus input
44	D15	I	24-bit pixel bus input
45	D14	I	24-bit pixel bus input
46	D13	I	24-bit pixel bus input
47	D12	I	24-bit pixel bus input
48	PGND2	–	PLL analog ground
49	PVCC2	–	Analog power supply for filter PLL (3.3V)
50	D11	I	24-bit / 12-bit pixel bus input
51	D10	I	24-bit / 12-bit pixel bus input
52	D9	I	24-bit / 12-bit pixel bus input
53	D8	I	24-bit / 12-bit pixel bus input
54	D7	I	24-bit / 12-bit pixel bus input
55	D6	I	24-bit / 12-bit pixel bus input
56	IDCK–	I	Data clock - input
57	IDCK+	I	Data clock + input
58	D5	I	24-bit / 12-bit pixel bus input
59	D4	I	24-bit / 12-bit pixel bus input
60	D3	I	24-bit / 12-bit pixel bus input
61	D2	I	24-bit / 12-bit pixel bus input
62	D1	I	24-bit / 12-bit pixel bus input
63	D0	I	24-bit / 12-bit pixel bus input
64	GND	–	Digital ground

■ AXY1117 (MR MAIN ASSY: U4201)

• 3 Outputs DD Control Unit

● Pin Arrangement



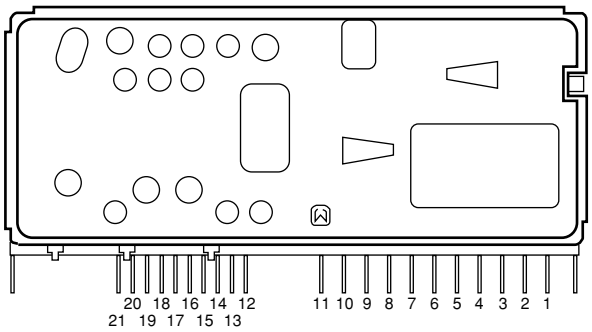
● Pin Function

No.	Pin Name	Pin Function
1	Vin	Input
2	Vin	
3	GND	Ground for input side
4	GND	
5	ON/OFF	Output ON/OFF
6	GND	Ground for output side
7	Vo3	1.8V output
8	Vo1	3.3V output
9	Vo1	3.3V output
10	GND	Ground for output side
11	GND	
12	GND	
13	Vo2	1.2V output
14	Vo2	1.2V output

■ AXF1130 (MR MAIN ASSY : U4401)

• Front End

● Pin Arrangement



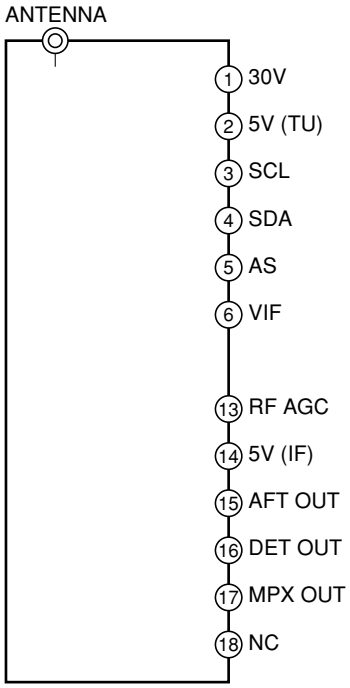
● Pin Function

No.	Pin Name	Pin Function
1	AGC	AGC (4.0V gain max.)
2	TU	Power supply for tuner
3	ADRS	Terminal for I^2C bus control
4	SCL	
5	SDA	
6	NC	No connection
7	V SUPPLY	5.0V
8	IF SW	0V/5.0V
9	BTL	30.0V
10	NC	No connection
11	IF1	IF
12	NC	No connection
13	BV	5.0V
14	AUDIO OUT	Audio output
15	GND	Ground
16	AFT	AFT output
17	AGC OUT	AGC output
18	VIDEO OUT	Video output
19	NC	No connection
20	GND	Ground
21	NC	No connection

■ AXF1148 (MR MAIN ASSY : U4402)

• Front End

● Pin Arrangement

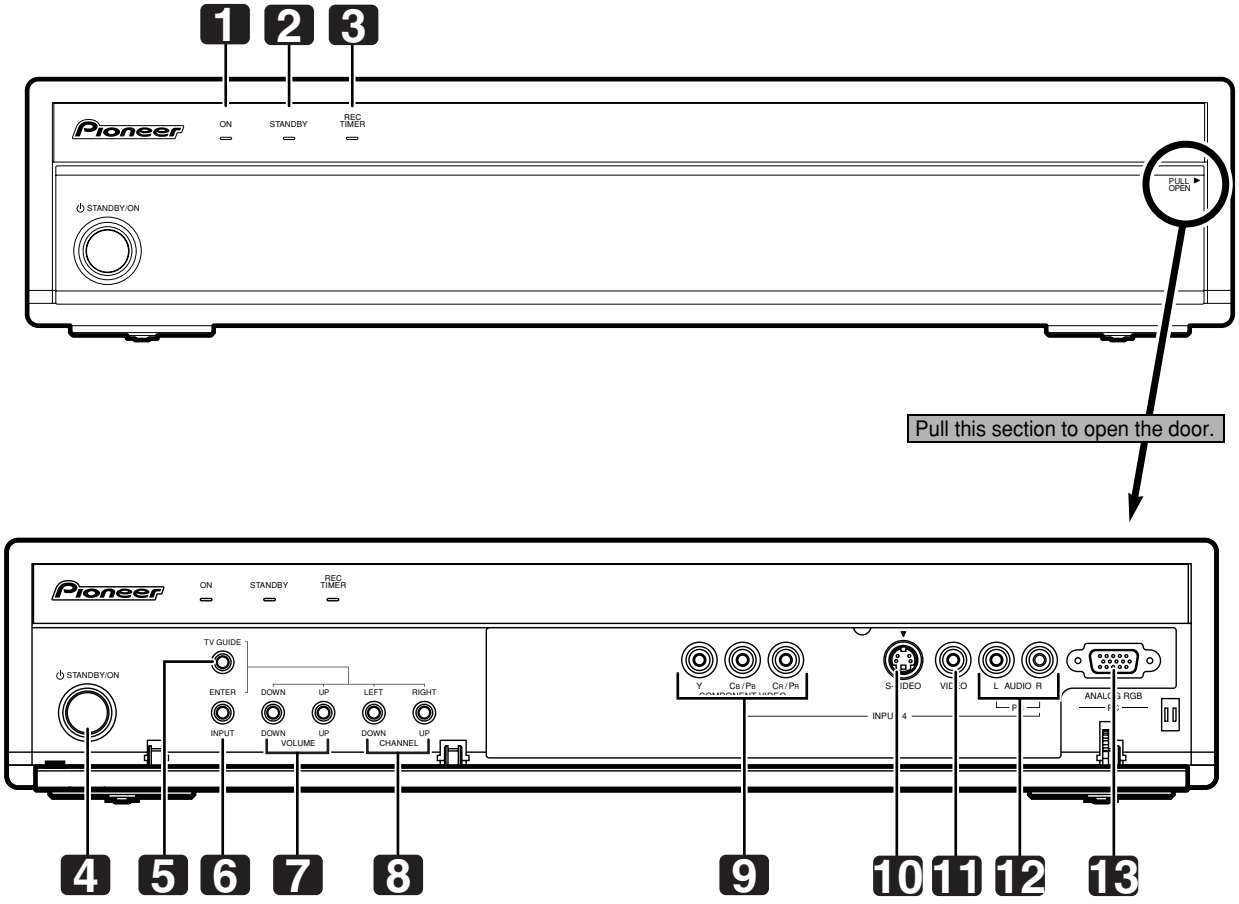


● Pin Function

No.	Pin Name	Pin Function
1	30V	Power supply for 30V
2	5V (TU)	Power supply for tuner
3	SCL	Terminal for CH selection serial data
4	SDA	
5	AS	Address selection
6	VIF	VIF output
13	RF AGC	RF AGC terminal
14	5V (IF)	Power supply for IF
15	AFT OUT	Analog AFT output
16	DET OUT	VIDEO output (Typical = 1.0Vp-p)
17	MPX OUT	MPX output
18	NC	No connection

8. PANEL FACILITIES

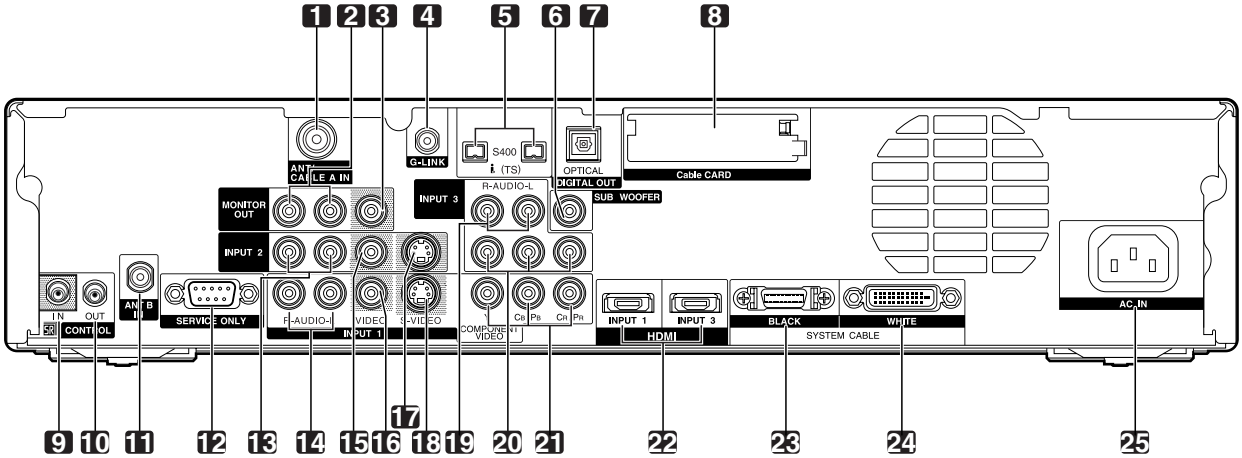
■ Front view



1 POWER ON indicator
2 STANDBY indicator
3 REC TIMER indicator
4 **STANDBY/ON** button
5 **TV GUIDE** button*
6 **INPUT** button (**ENTER** button*)
7 **VOLUME UP/DOWN** buttons (**UP/DOWN** buttons*)
8 **CHANNEL UP/DOWN** buttons (**LEFT/RIGHT** buttons*)
9 INPUT 4 terminals (COMPONENT VIDEO: Y, CB/PB, CR/PR)
10 INPUT 4 terminal (S-VIDEO)
11 INPUT 4 terminal (VIDEO)
12 INPUT 4/PC terminals (AUDIO)
13 PC INPUT terminal (ANALOG RGB)

The buttons with asterisks (*) can operate the TV Guide On Screen™ system.

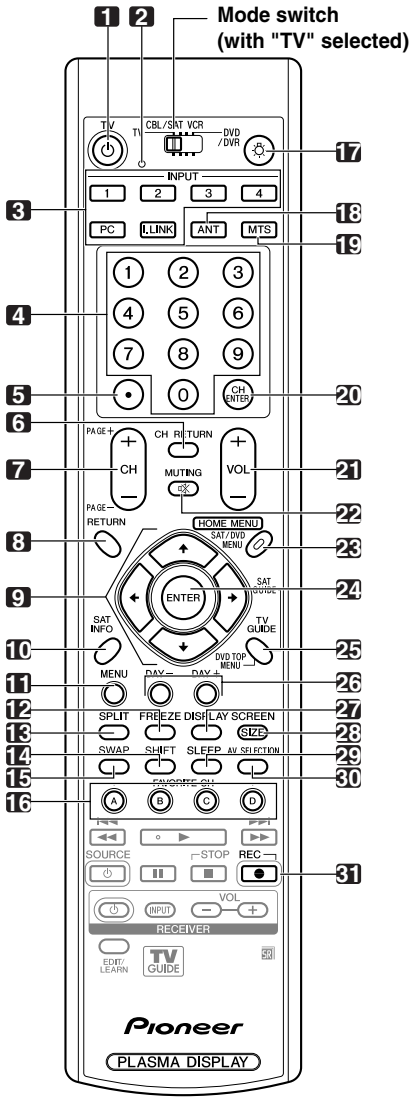
Rear view



1 ANT/CABLE A IN terminal
2 MONITOR OUT terminals (AUDIO)
3 MONITOR OUT terminal (VIDEO)
4 G-LINK terminal
5 i.LINK terminals
6 SUB WOOFER terminal
7 DIGITAL OUT terminal (OPTICAL)
8 CableCARD™ slot
9 CONTROL IN terminal
10 CONTROL OUT terminal
11 ANT B IN terminal
12 RS-232C terminal (used for factory setup)
13 INPUT 2 terminals (AUDIO)
14 INPUT 1 terminals (AUDIO)
15 INPUT 2 terminal (VIDEO)
16 INPUT 1 terminal (VIDEO)
17 INPUT 2 terminal (S-VIDEO)
18 INPUT 1 terminal (S-VIDEO)
19 INPUT 3 terminals (AUDIO)
20 INPUT 3 terminals (COMPONENT VIDEO: Y, CB/PB, CR/PR)
21 INPUT 1 terminals (COMPONENT VIDEO: Y, CB/PB, CR/PR)
22 HDMI terminals (INPUT1/INPUT3)
23 SYSTEM CABLE terminal (BLACK)
24 SYSTEM CABLE terminal (WHITE)
25 AC IN terminal

■ Remote control unit

This section describes the functions of the buttons available when the mode switch has been set to TV.



1 **TV** ⏻: Turns on the power to the Plasma Display or places it into standby mode.
2 Transmission confirmation LED
3 **INPUT**: Selects an input source of the Plasma Display. (INPUT 1, INPUT 2, INPUT 3, INPUT 4, PC, i.LINK)
4 **0 - 9**: Selects the channel.
5 **• (dot)**: Enters a dot.
6 **CH RETURN**: Returns to the previous channel. This button is disabled while the TV Guide On Screen™ system is displayed.
7 **CH +/–**: Selects the channel.
PAGE +/– (for the TV Guide On Screen™ system): Scrolls the program listing screen vertically.
8 **RETURN**: Returns to the previous menu screen.
9 **↑/↓/←/→**: Selects a desired item on the menu screen.
10 **INFO**: Displays a channel banner when a TV program is being watched.
When the TV Guide On Screen˛ system is in operation, displays information about the currently highlighted channel (if available).
11 **MENU**: Displays a panel menu in the TV Guide On Screen™ system.
12 **FREEZE**: Freezes a frame from a moving image. Press again to cancel the function.
13 **SPLIT**: Switches the screen mode among 2-screen, picture-in-picture, and single-screen.
14 **SHIFT**: Moves the location of the small screen when in the picture-in-picture mode.
15 **SWAP**: Switches between the two screens when in the 2-screen or picture-in-picture mode.
16 **FAVORITE CH (A, B, C, D)**:
Selects any of the four preset channels.
While watching, you can toggle the set channels by pressing **A**, **B**, **C** and **D**.
17 ☼: When pressed, all buttons on the remote control unit will light. The lighting will turn off if no operations are performed within about 5 seconds.
This button is used for performing operations in dark places.
18 **ANT**: Selects the antenna (A, B).
19 **MTS**: Selects the MTS/SAP.
20 **CH ENTER**: Executes a channel number.
21 **VOL +/–**: Sets the volume.
22 **MUTING**: Mutes the sound.
23 **HOME MENU**: Displays the Home Menu screen.
24 **ENTER**: Executes a command.
25 **TV GUIDE**: Displays the TV Guide On Screen™ system.
26 **DAY +/–**: Jumps to the next or previous day of program listings in the TV Guide On Screen™ Listing service.
27 **DISPLAY**: Displays the channel information.
28 **SCREEN SIZE**: Selects the screen size.
29 **SLEEP**: Sets the sleep timer.
30 **AV SELECTION**: Selects audio and video settings. (AV mode: STANDARD, DYNAMIC, MOVIE, GAME, USER. PC mode: STANDARD, USER.)
31 ● (REC): When using the TV Guide On Screen™ System, starts recording with a connected VCR or D-VHS recorder.

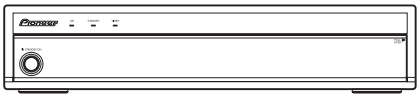
■ Cleaning

• Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools:

Position to be cleaned	Cleaning tools	Remark
Fans	Cleaning paper : GED-008	Refer to "2.3 EXTERIOR SECTION" , "7.1.2 DISASSEMBLY SECTION".

Pioneer sound.vision.soul

Service Manual



PDP-R06U

ORDER NO.
ARP3280

MEDIA RECEIVER

PDP-R06U
PRO-R06U

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
PDP-R06U	KUCXJ	AC 120V	
PRO-R06U	KUCXJ	AC 120V	

This service manual should be used together with the following manual(s).

Model No.	Order No.	Remarks
PDP-R06U, PRO-R06U	ARP3279	EXPLODED VIEWS, BLOCK DIAGRAM etc.

For details, refer to "Important Check Points for good servicing".

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936

T-IZR SEPT. 2005 printed in Japan

SAFETY INFORMATION

This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 - Proposition 65

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

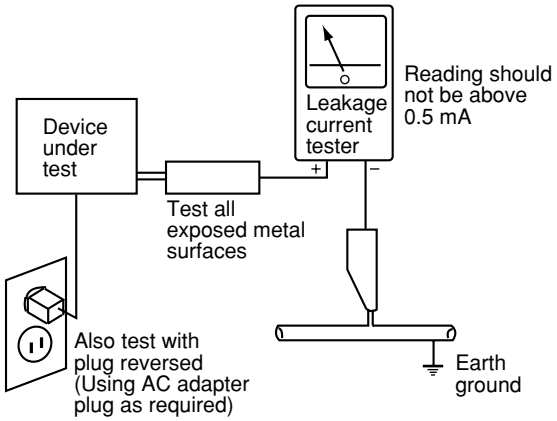
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol.
Please be sure to confirm and follow these procedures.

1. Product safety

Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification(addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris.
Soldering should be finished with the proper quantity. (Refer to the example)

④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs.
In addition, be sure that there are no pinched wires, etc.

⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages.
If you find a damaged power cord, please exchange it with a suitable one.

⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries.
Please pay attention to your surroundings and repair safely.

2. Adjustments

To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification.
Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts

Use grease and adhesives that are equal to the specified substance.
Make sure the proper amount is applied.

4. Cleaning

For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws

To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

CONTENTS

A

B

C

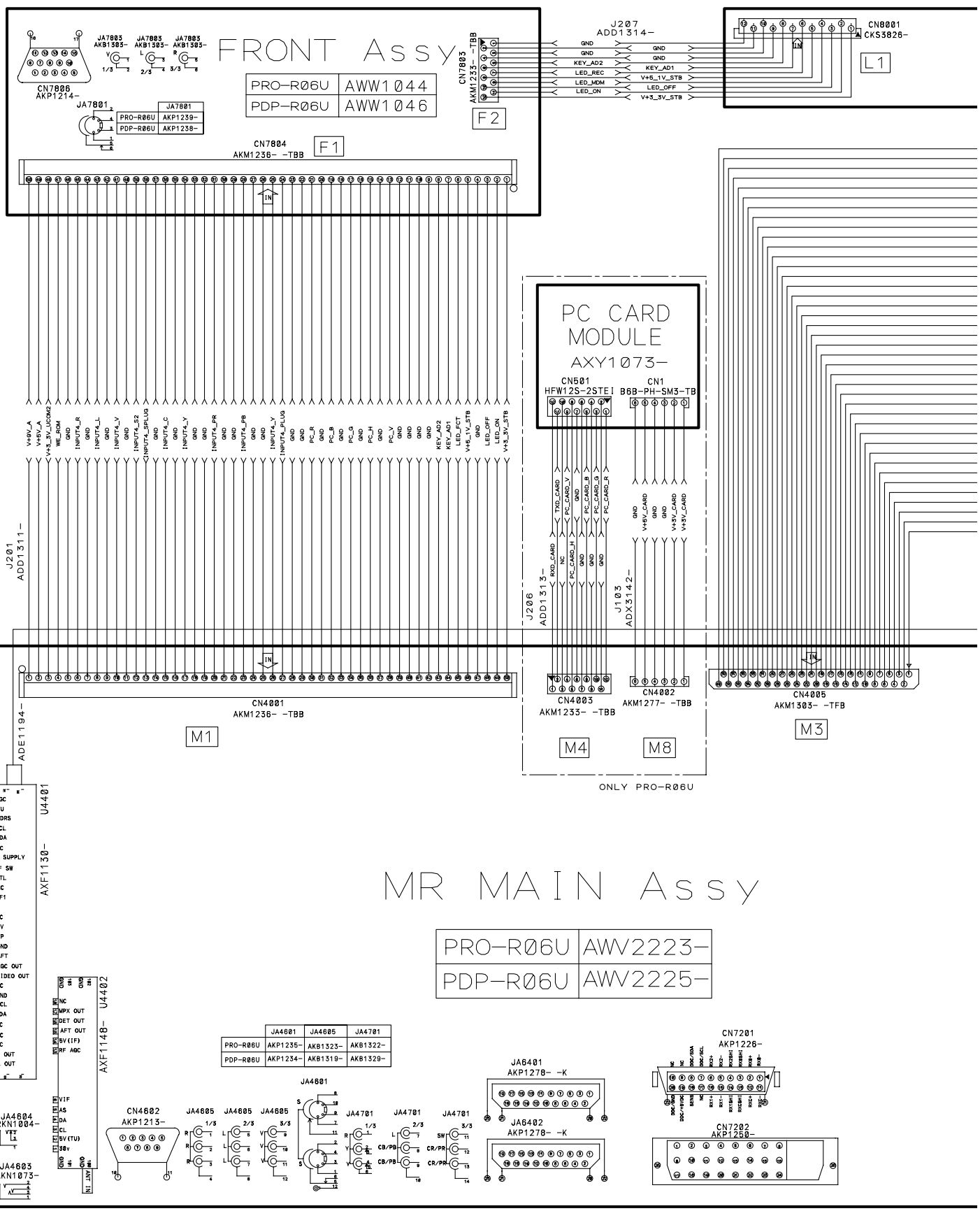
D

E

F

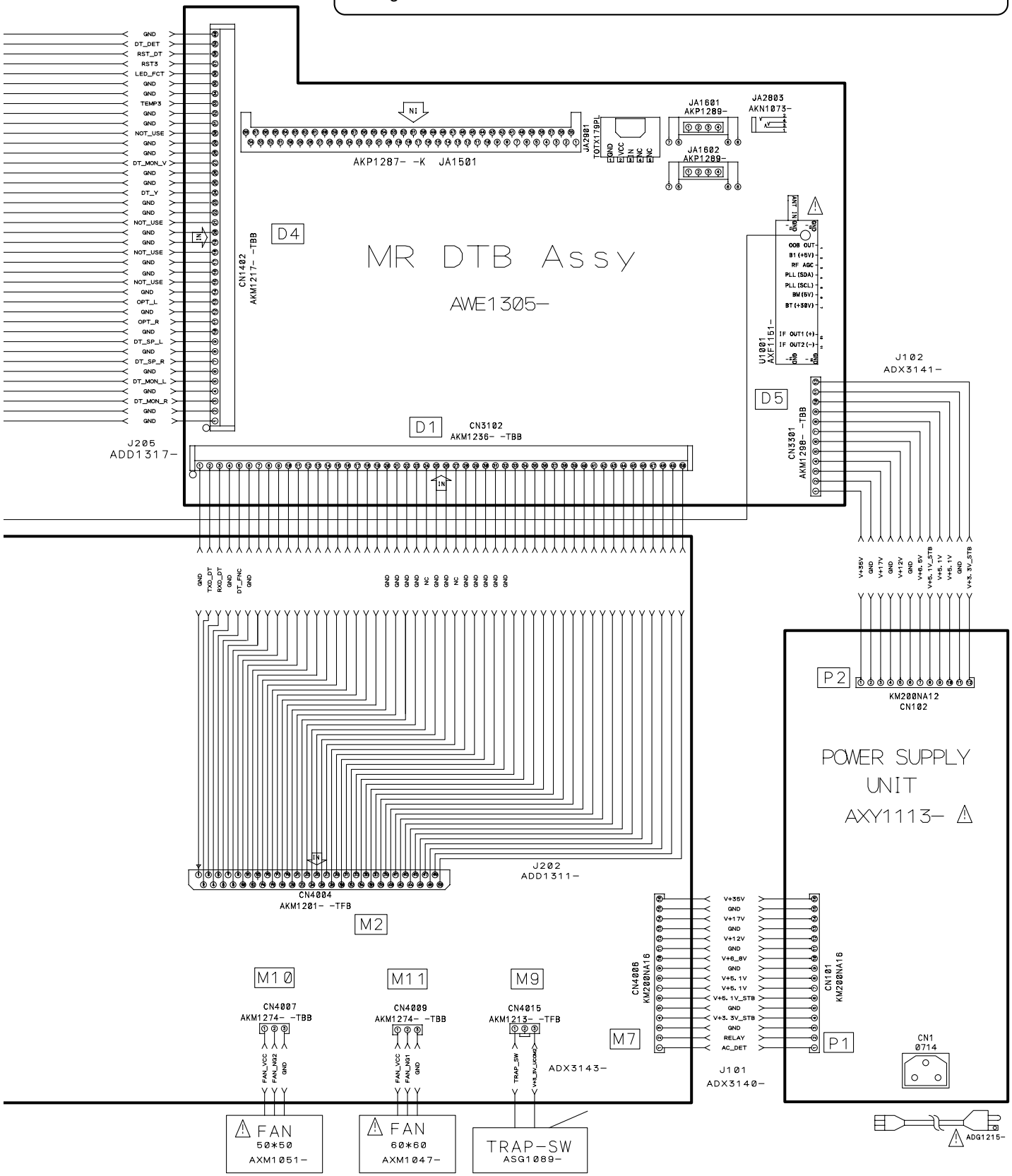
3. SCHEMATIC DIAGRAM

3.1 OVERALL WIRING DIAGRAM



LED Assy
AWW1045

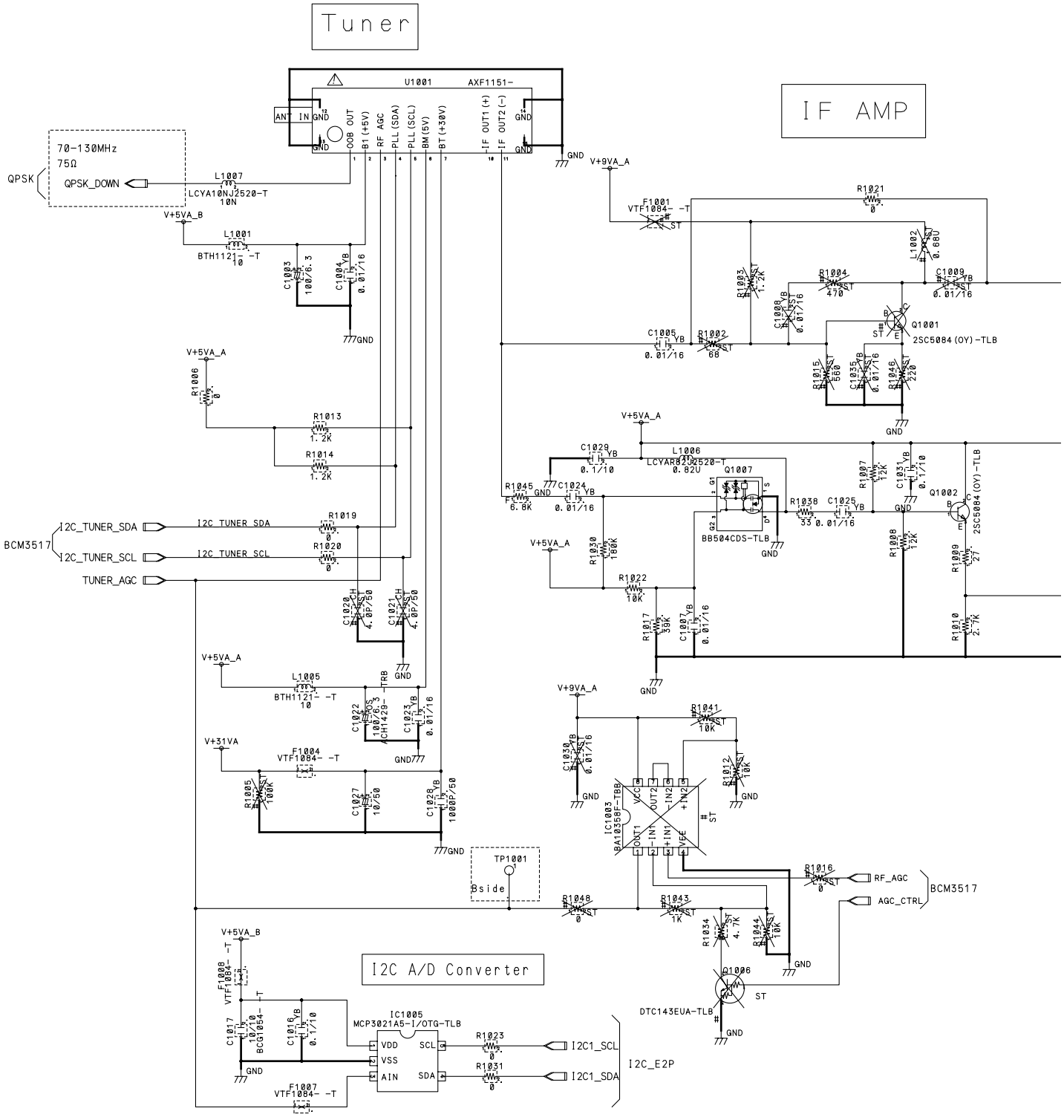
- When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

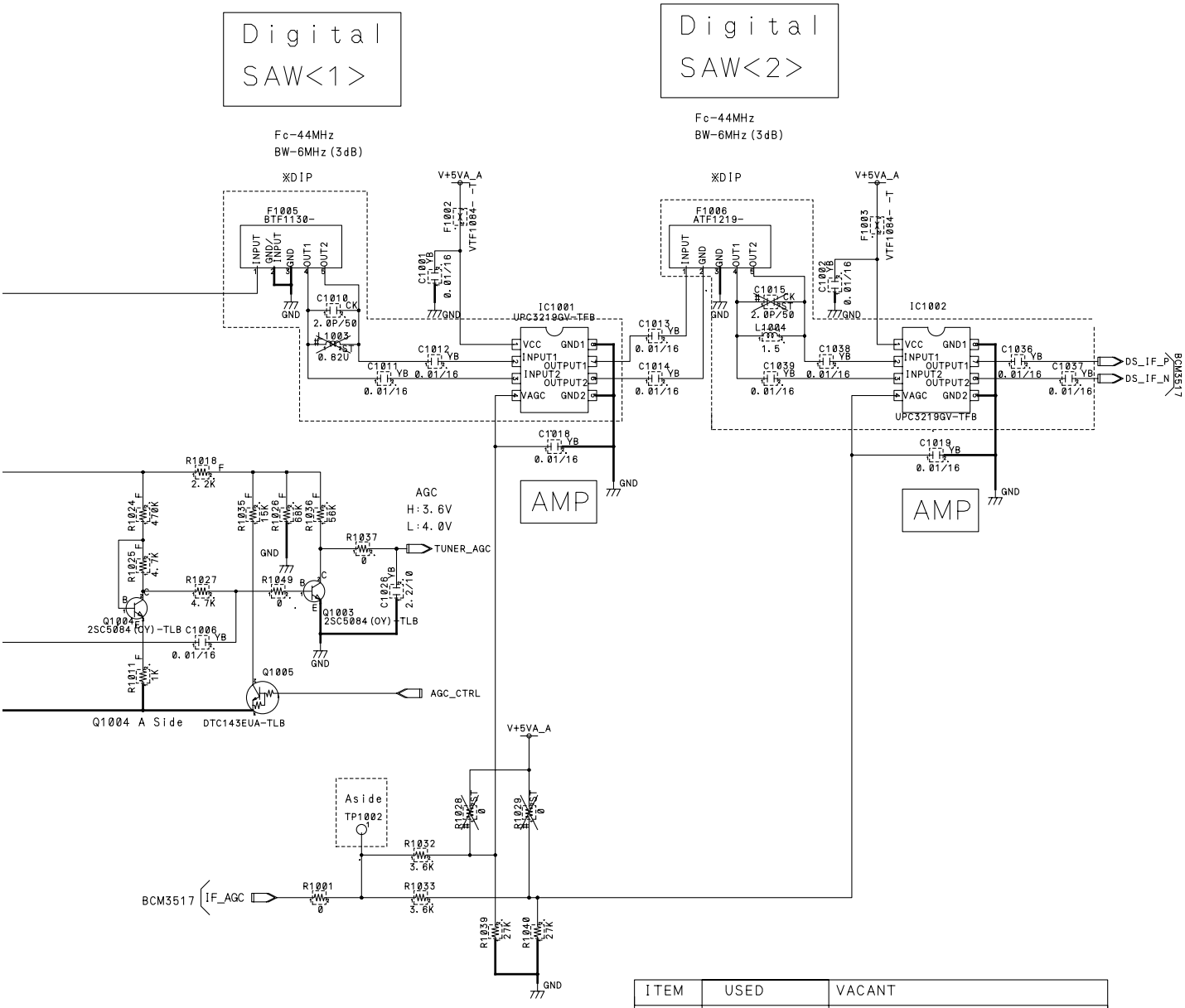


3.2 MR DTB ASSY (1/14)

MR DTB ASSY (1/14)

• TUNER / IF BLOCK





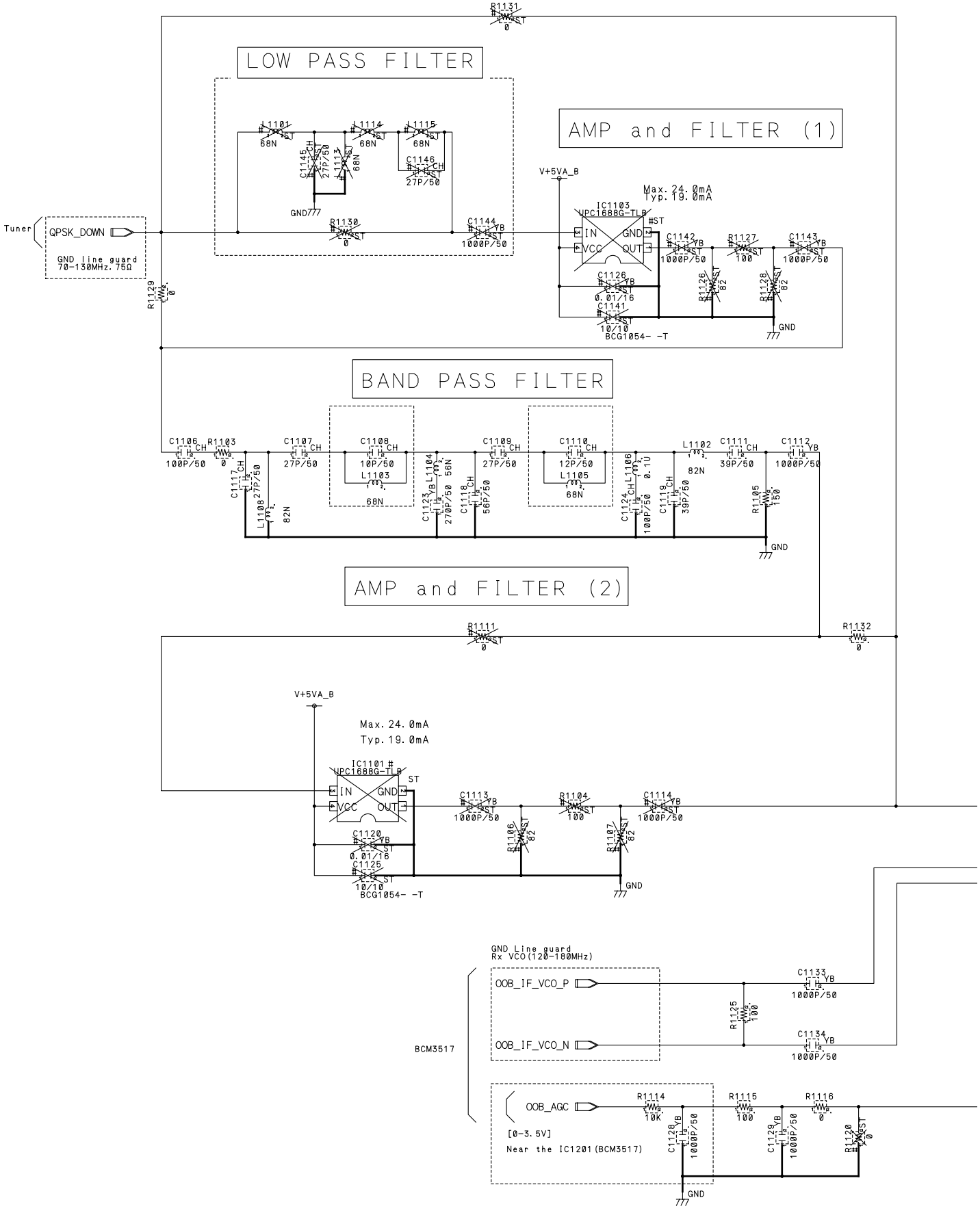
ITEM	USED	VACANT
C	1001-1039	1008, 1009, 1015, 1020, 1021 1030, 1032-1035
F	1002-1008	
IC	1001-1005	1003, 1004
L	1001-1007	1002, 1003
Q	1002-1007	1006
R	1001-1045	1002-1005, 1012, 1015, 1016 1028, 1029, 1034, 1041-1044
U	1001	

X: Do not mount

3.3 MR DTB ASSY (2/14)

MR DTB ASSY (2/14)

• QPSK Rx BLOCK



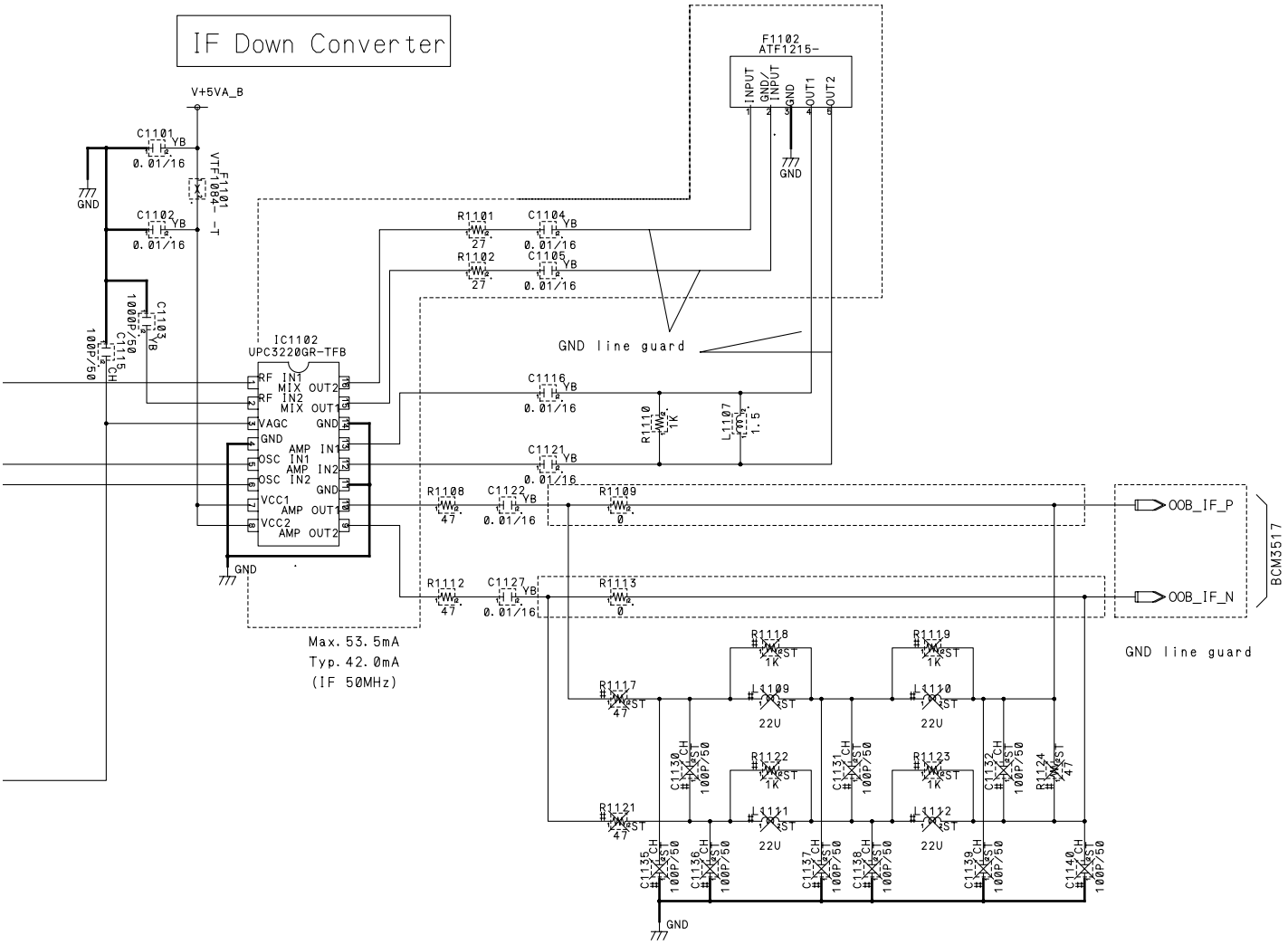
ITEM	USED	VACANT
C	1101-1134	1113, 1114, 1120, 1125, 1126 1130-1132
F	1101-1102	
IC	1102	
L	1102-1108	
Q	----	
R	1101-1132	1104, 1106, 1107, 1111, 1131 1117-1124, 1126-1128, 1130
-	----	

X : Don't mount

QPSK Rx

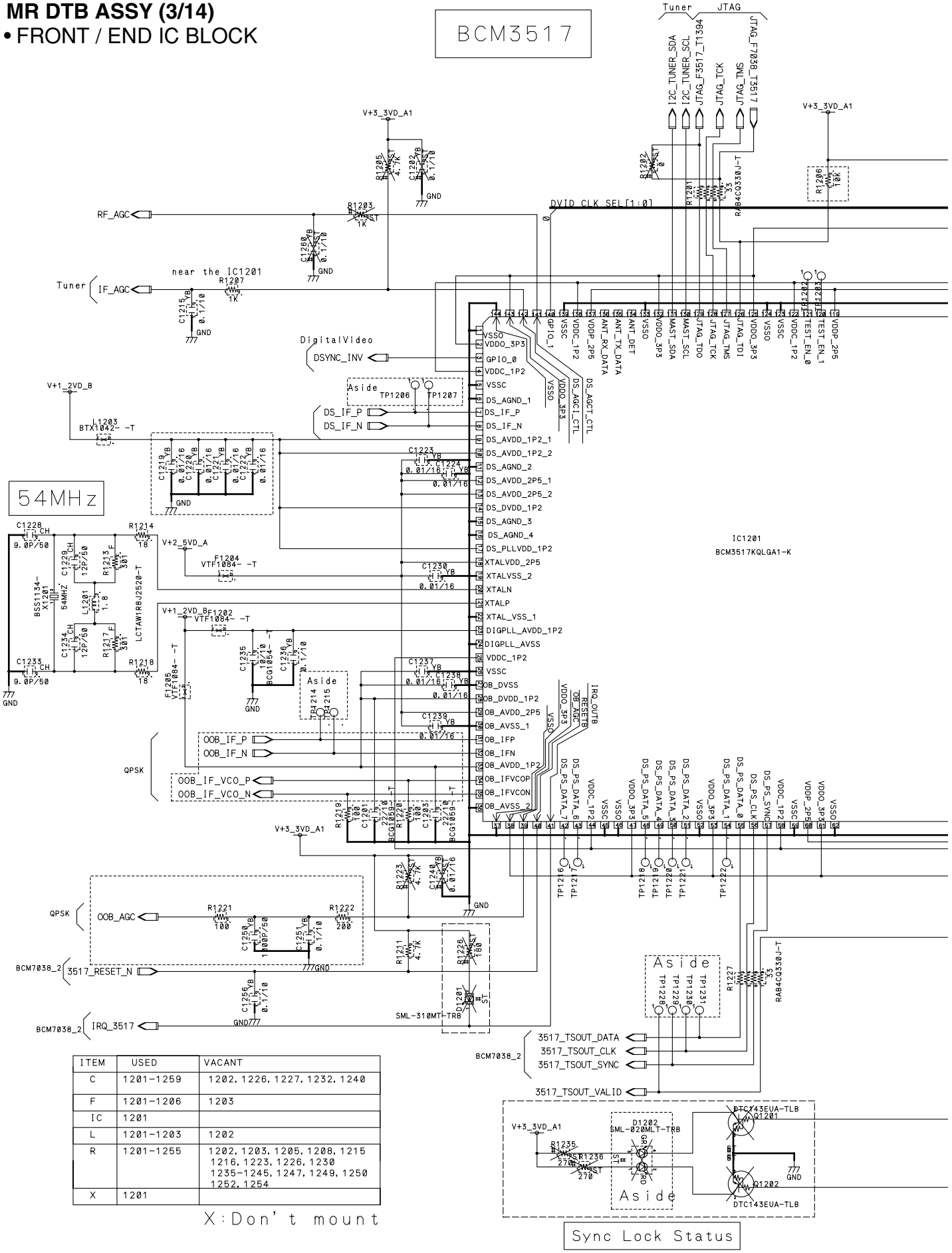
QPSK Rx SAW Filter

IF Down Converter



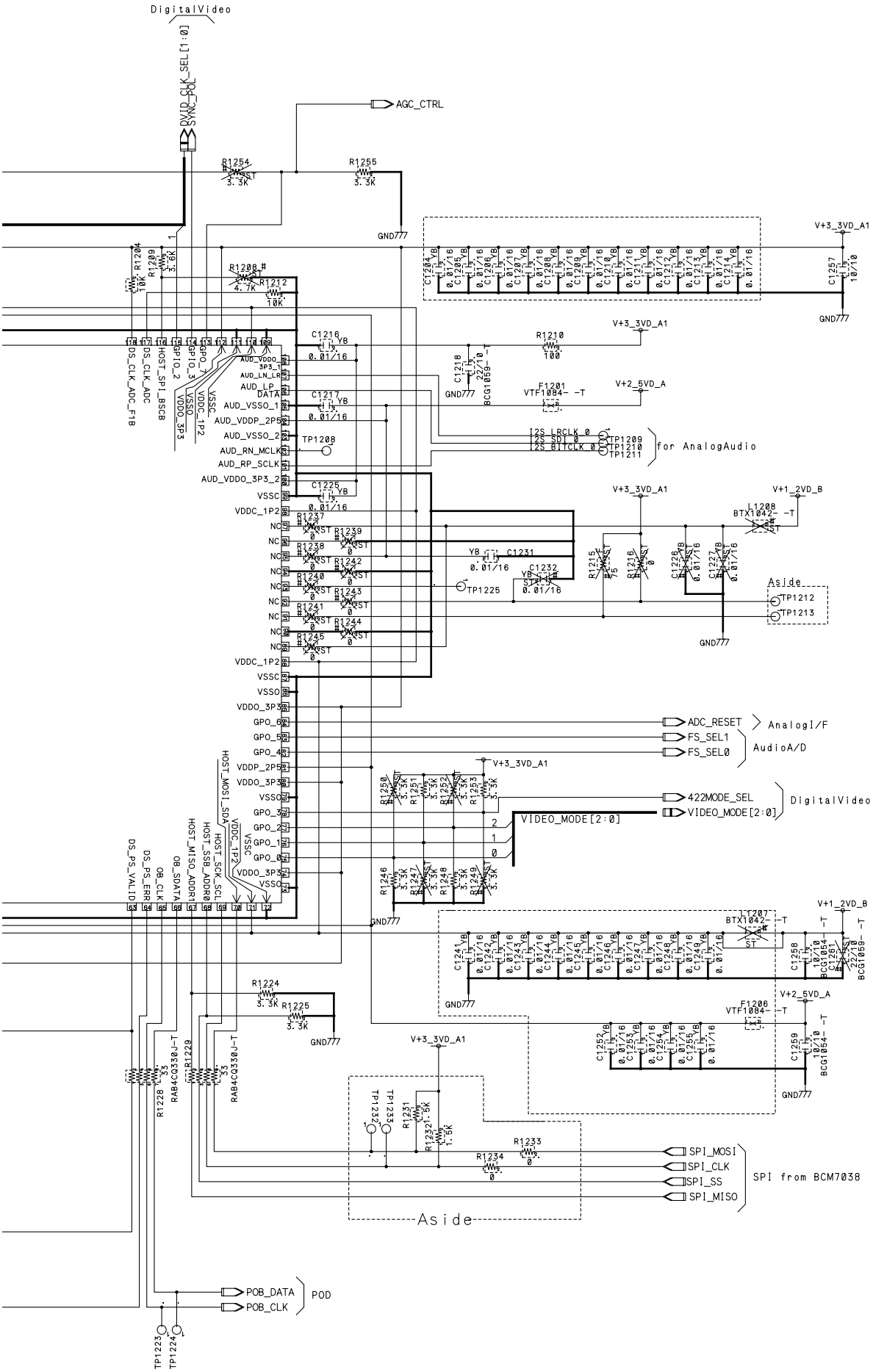
MR DTB ASSY (3/14)

- FRONT / END IC BLOCK



ITEM	USED	VACANT
C	1201–1259	1202, 1226, 1227, 1232, 1240
F	1201–1206	1203
IC	1201	
L	1201–1203	1202
R	1201–1255	1202, 1203, 1205, 1208, 1215 1216, 1223, 1226, 1230 1235–1245, 1247, 1249, 1250 1252, 1254
X	1201	

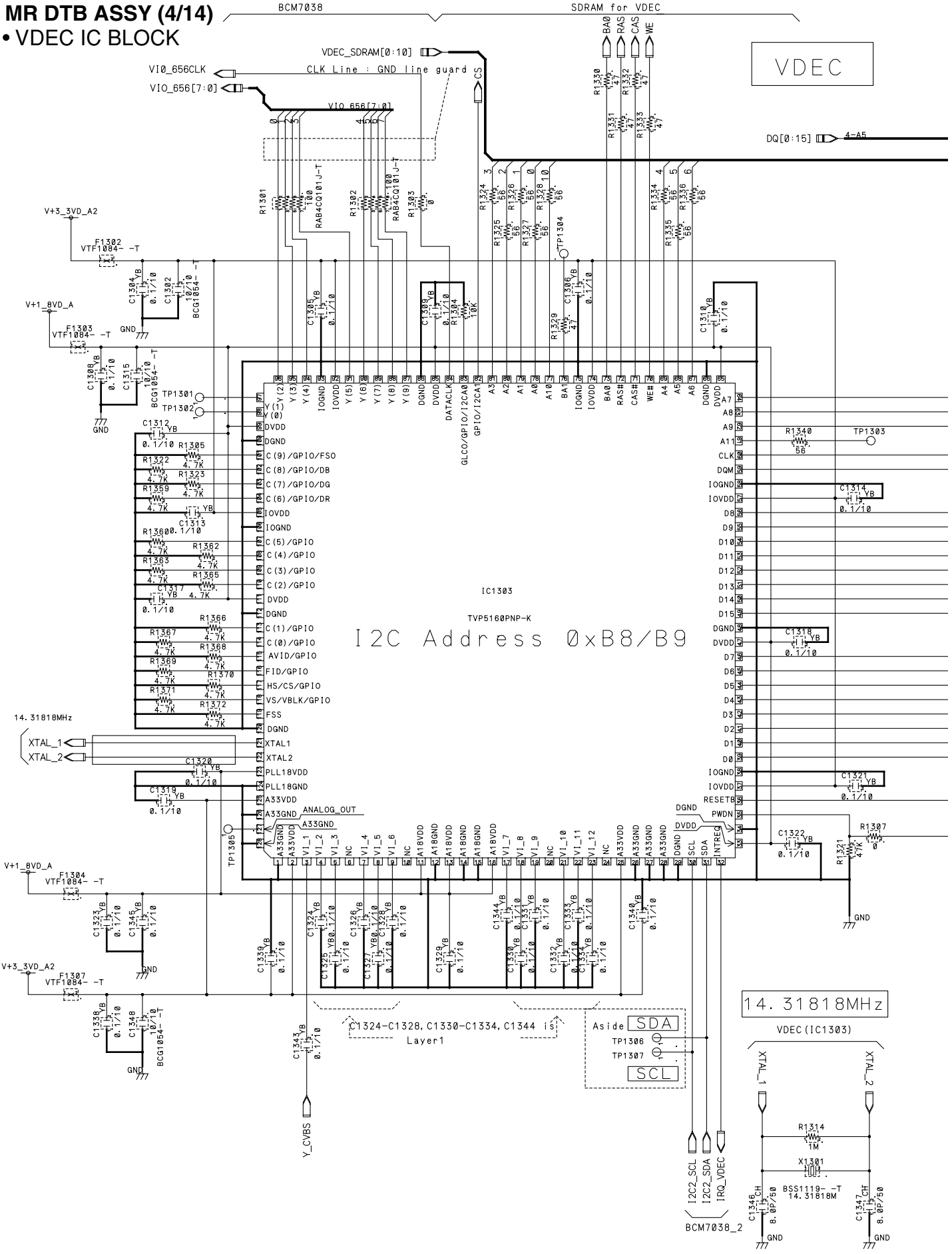
X : Don't mount


DigitalVideo
SYNC_POL
DVID_CLK_SEL[1:0]
AGC_CTRL
R1254
3.3K
R1255
3.5K
GND777
V+3_3VD_A1
C1257
10/10
R1210
100
V+2_5VD_A
F1201
VTF1084- -T
I2S_LRCLK_0
I2S_SDI_0
I2S_BITCLK_0
TP1209
TP1210
TP1211
for AnalogAudio
V+1_2VD_B
L1208
BTX1042- -T
C1231
C1232
TP1225
Aside
TP1212
TP1213
ADC_RESET
FS_SEL1
FS_SEL0
AnalogI/F
AudioA/D
422MODE_SEL
VIDEO_MODE[2:0]
DigitalVideo
L1207
F1206
R1224
3.3K
R1225
3.3K
R1228
33
R1229
33
RAB4CQ330J-T
R1231
1.5K
R1232
1.5K
R1233
0
R1234
0
SPI_MOSI
SPI_CLK
SPI_SS
SPI_MISO
SPI from BCM7038
Aside
POB_DATA
POB_CLK
POD
TP1223
TP1224

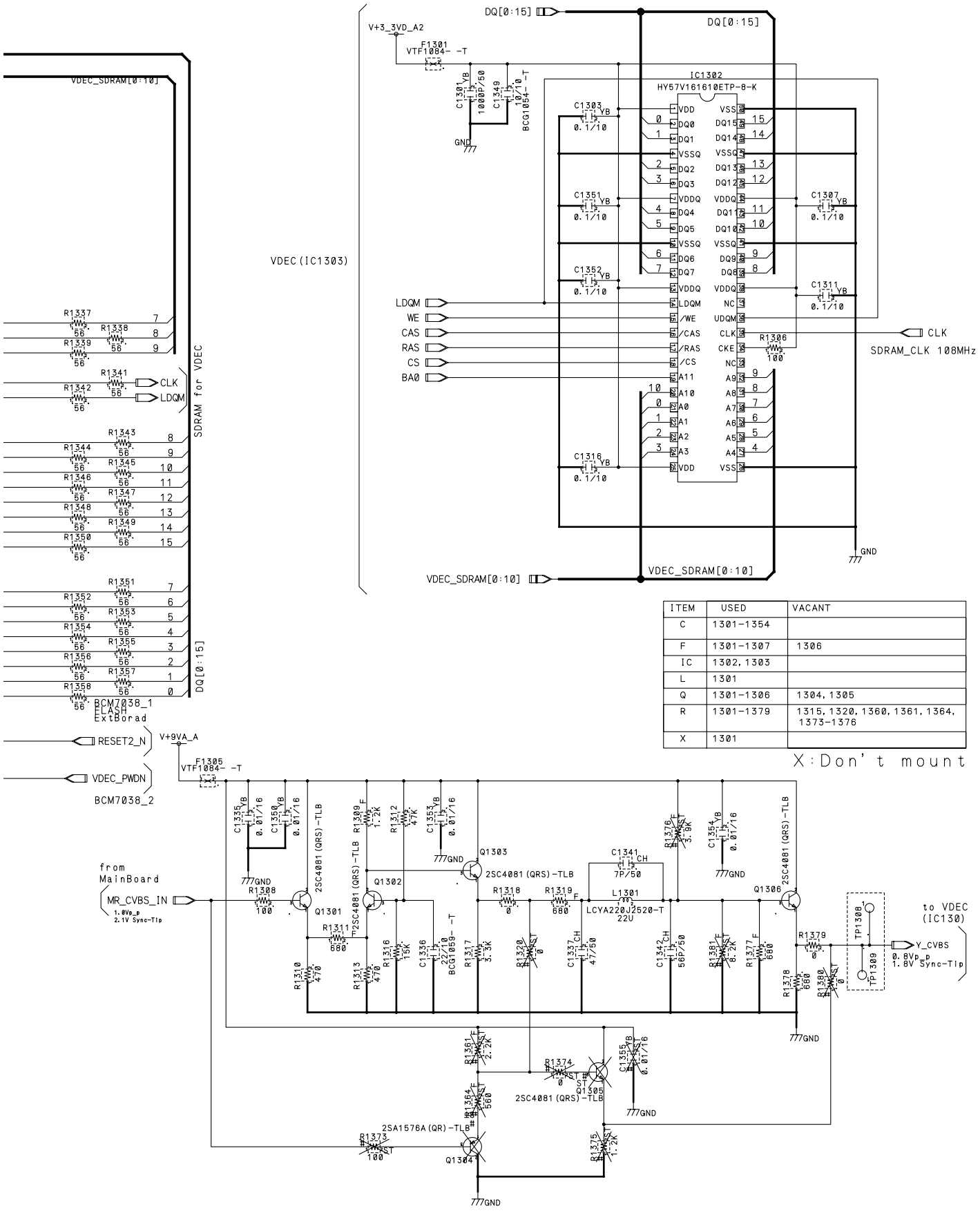
3.5 MR DTB ASSY (4/14)

MR DTB ASSY (4/14)

• VDEC IC BLOCK



SDRAM for VDEC



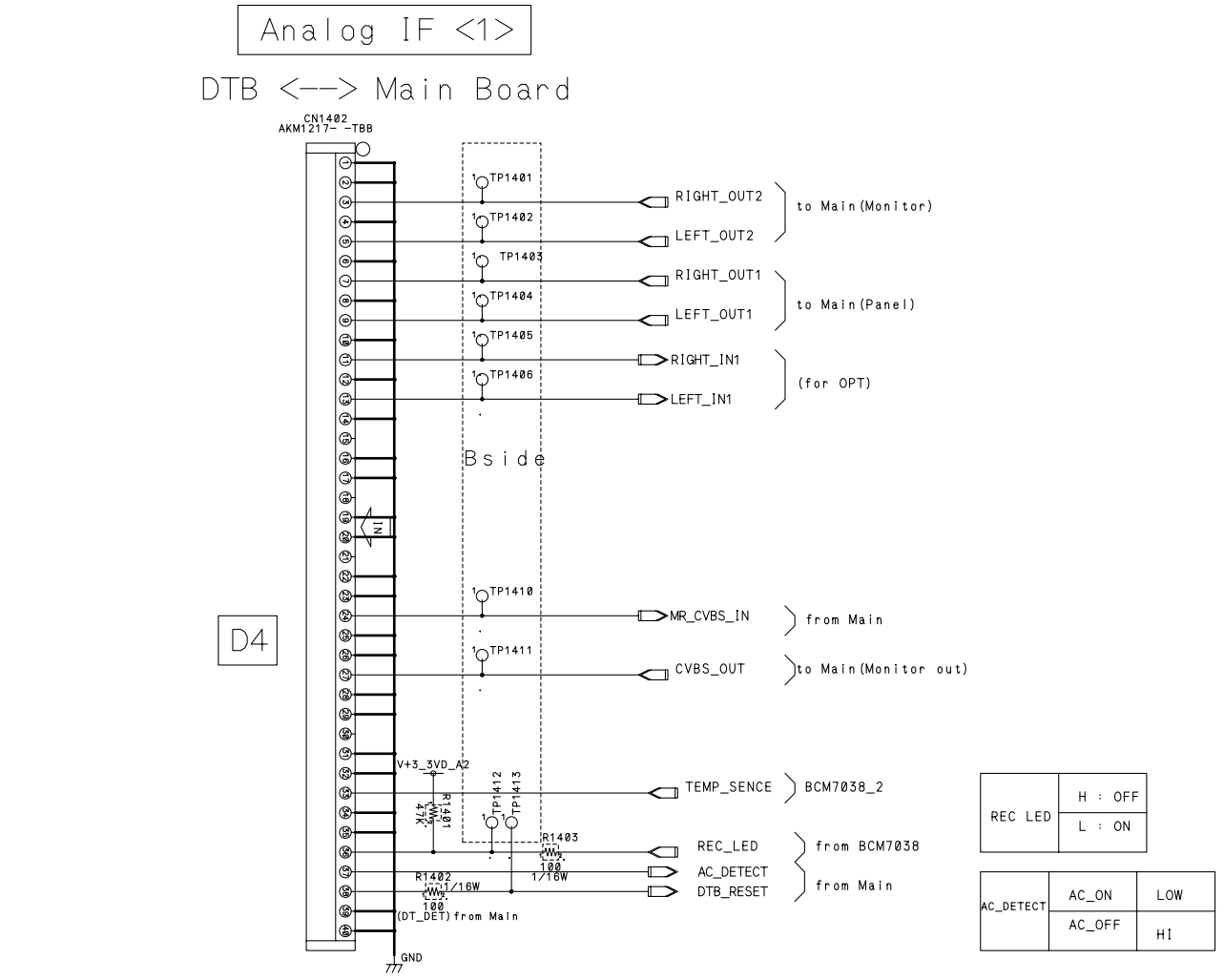
ITEM	USED	VACANT
C	1301–1354	
F	1301–1307	1306
IC	1302, 1303	
L	1301	
Q	1301–1306	1304, 1305
R	1301–1379	1315, 1320, 1360, 1361, 1364, 1373–1376
X	1301	

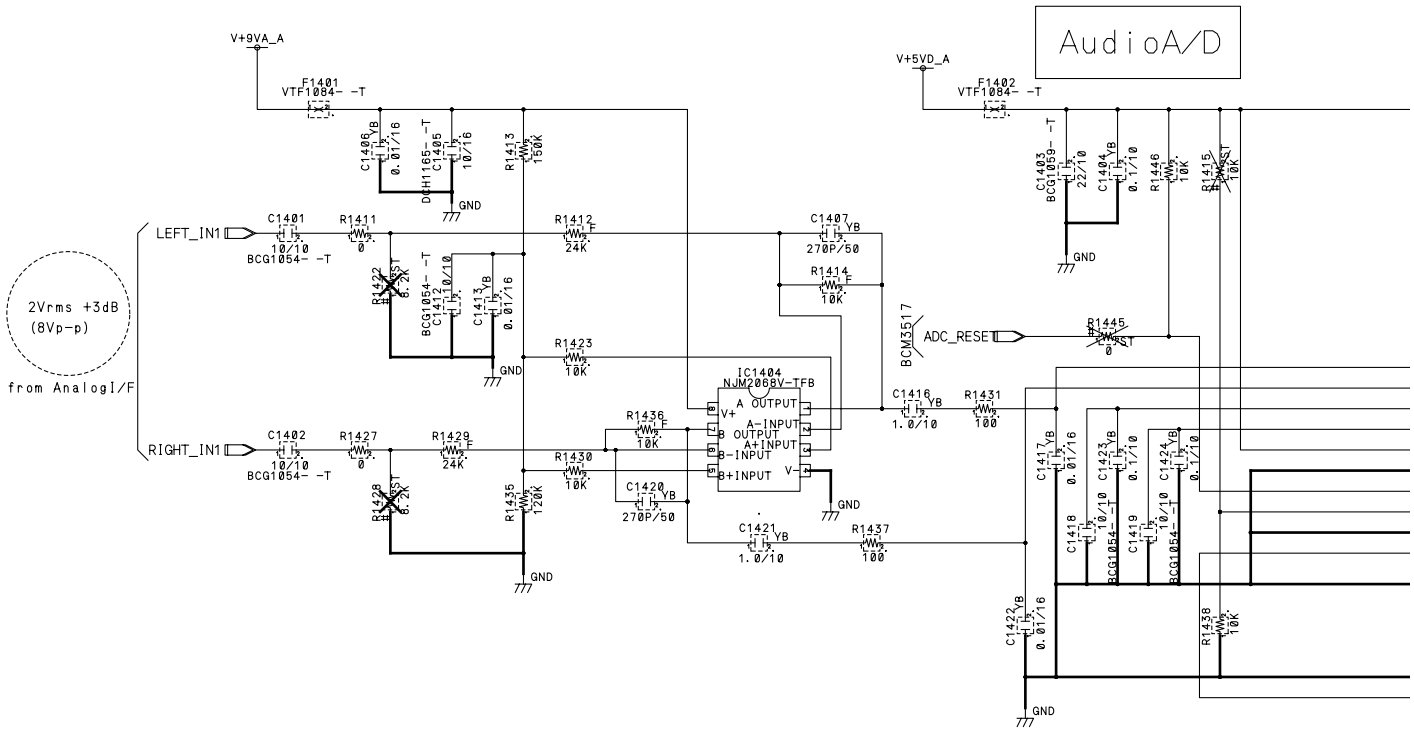
X : Don't mount

3.6 MR DTB ASSY (5/14)

MR DTB ASSY (5/14)

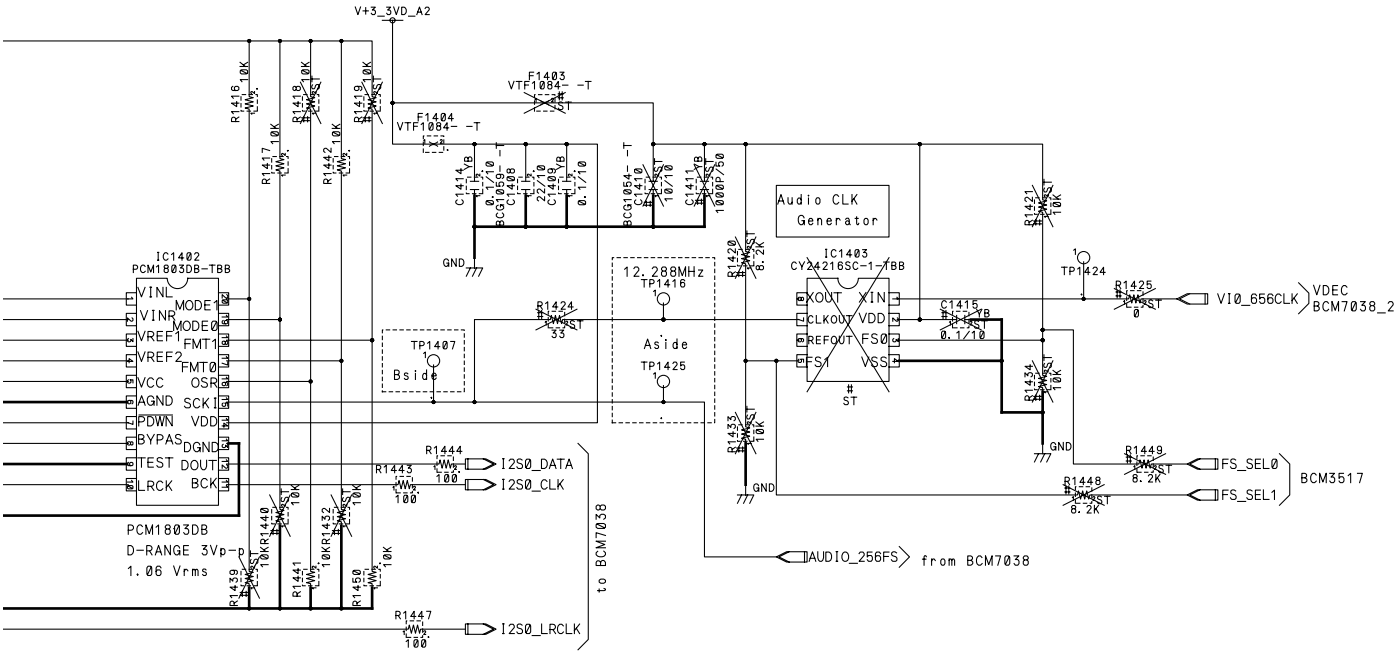
• A-AD, AV-I/F BLOCK





ITEM	USED	VACANT
C	1401-1424	1410, 1411, 1415
F	1401-1404	1403
IC	1402, 1404	
L	----	
R	1401-1450	1404-1410, 1415, 1418-1422 1424-1426, 1428, 1432-1434 1439, 1440, 1445, 1448, 1449
CN	1402	

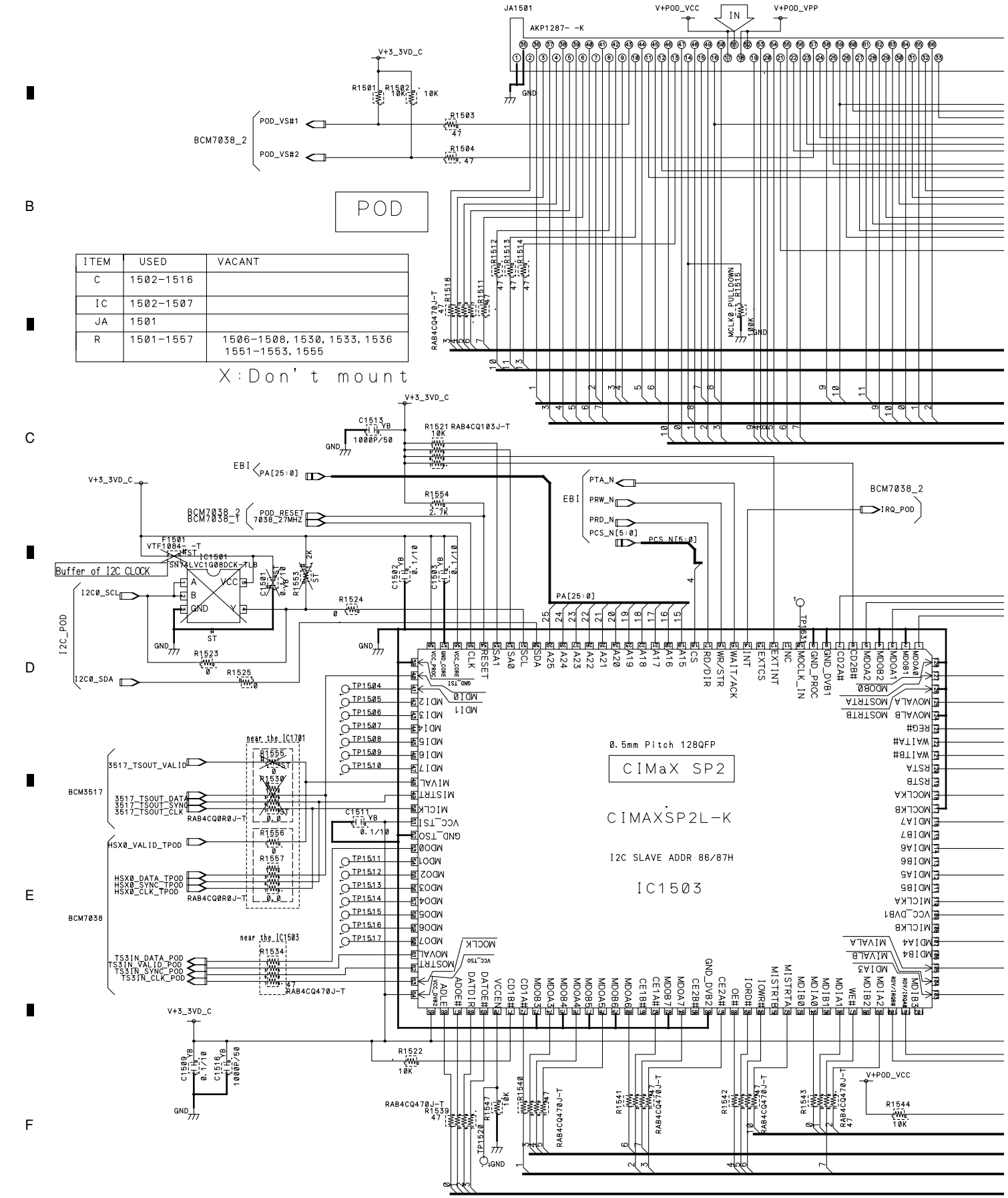
X:Don't mount



3.7 MR DTB ASSY (6/14)

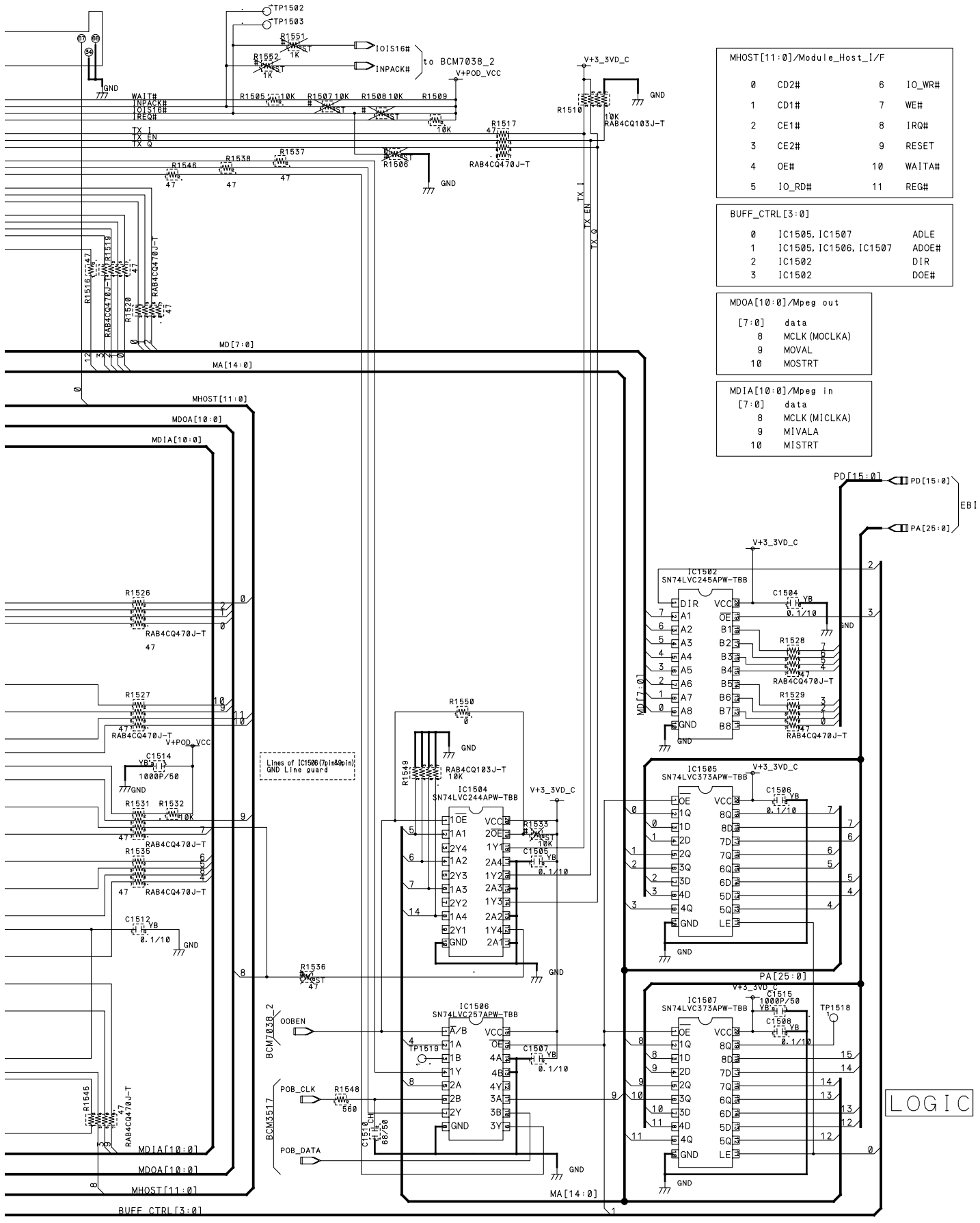
MR DTB ASSY (6/14)

- POD IC BLOCK



ITEM	USED	VACANT
C	1502–1516	
IC	1502–1507	
JA	1501	
R	1501–1557	1506–1508, 1530, 1533, 1536 1551–1553, 1555

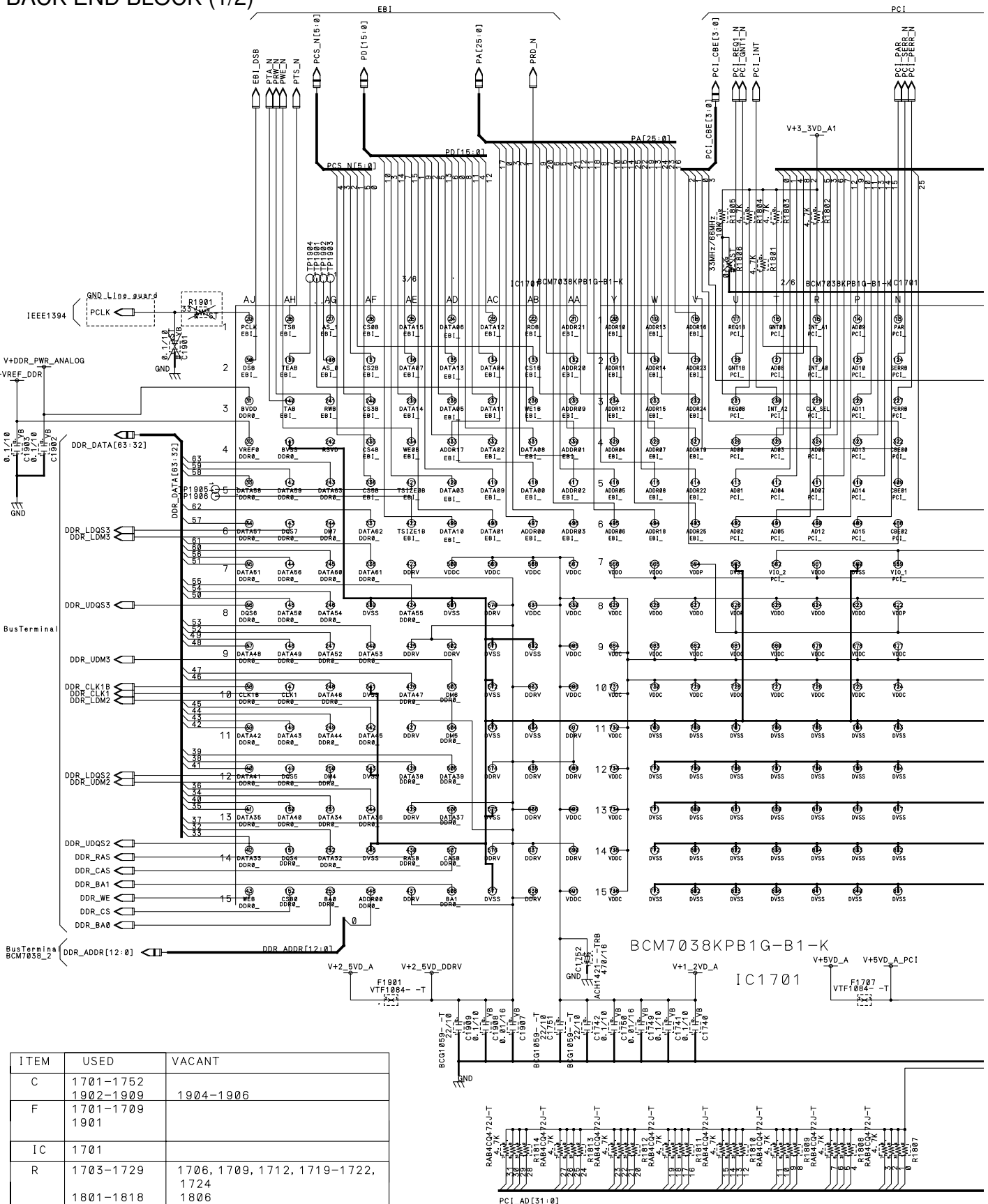
X : Don’t mount


MHOST[11:0]/Module_Host_I/F
0 CD2# 6 IO_WR#
1 CD1# 7 WE#
2 CE1# 8 IRQ#
3 CE2# 9 RESET
4 OE# 10 WAITA#
5 IO_RD# 11 REG#
BUFF_CTRL[3:0]
0 IC1505, IC1507 ADLE
1 IC1505, IC1506, IC1507 ADOE#
2 IC1502 DIR
3 IC1502 DOE#
MDOA[10:0]/Mpeg out
[7:0] data
8 MCLK (MOCLKA)
9 MOVAL
10 MOSTRT
MDIA[10:0]/Mpeg in
[7:0] data
8 MCLK (MICLKA)
9 MIVALA
10 MISTRT
to BCM7038_2
IOIS16#
INPACK#
WAIT#
INPACK#
IOIS16#
REG#
TX_I
TX_EN
TX_Q
MD[7:0]
MA[14:0]
MHOST[11:0]
MDOA[10:0]
MDIA[10:0]
BUFF_CTRL[3:0]
PD[15:0]
PA[25:0]
EBI
IC1502 SN74LVC245APW-TBB
IC1504 SN74LVC244APW-TBB
IC1505 SN74LVC373APW-TBB
IC1506 SN74LVC257APW-TBB
IC1506 SN74LVC373APW-TBB
IC1507 SN74LVC373APW-TBB
BCM7038_2
BCM3517
OOBEN
POB_CLK
POB_DATA
Lines of IC1506(7pin&9pin) GND Line guard
LOGIC

3.8 MR DTB ASSY (7/14)

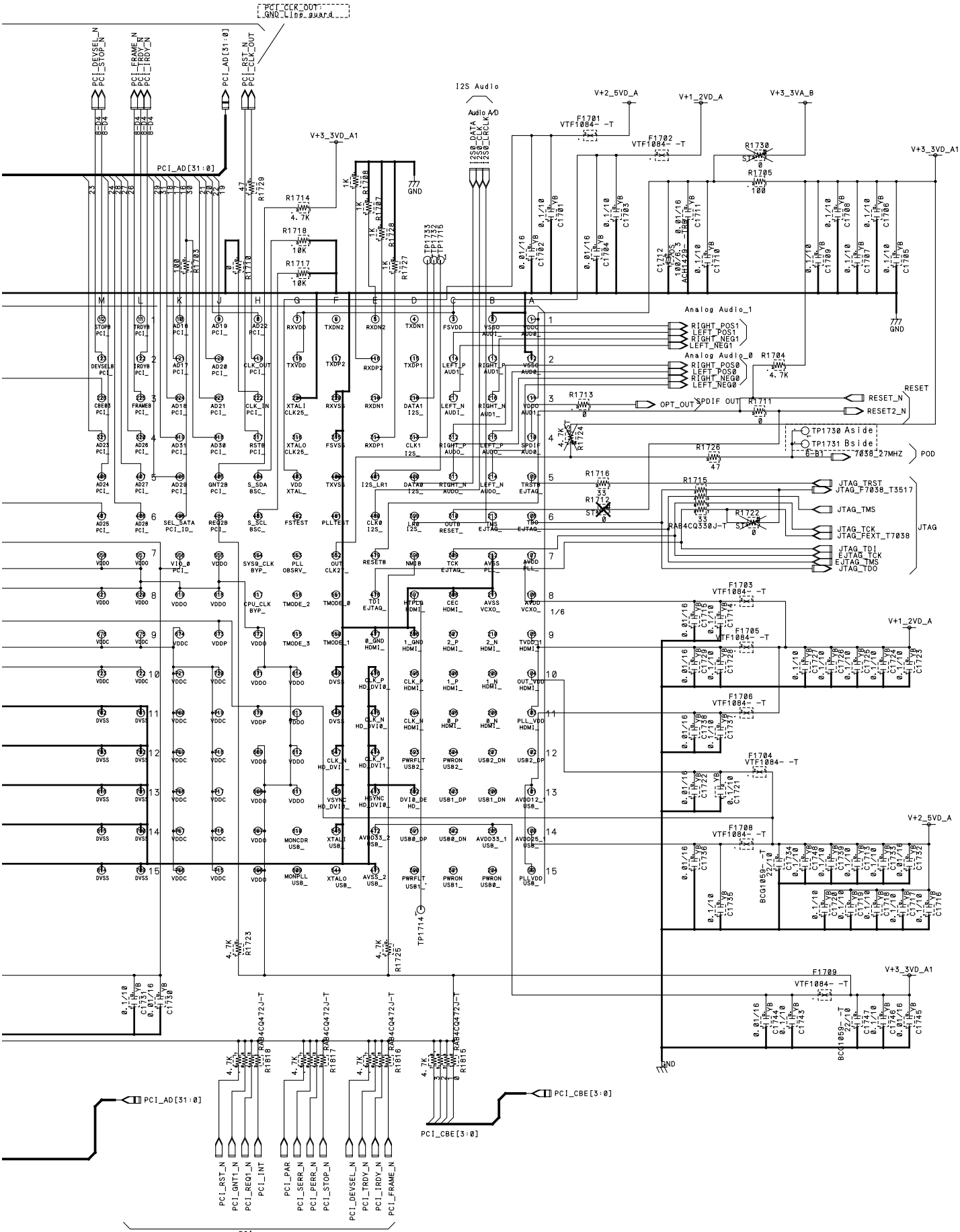
MR DTB ASSY (7/14)

• BACK END BLOCK (1/2)



ITEM	USED	VACANT
C	1701–1752 1902–1909	 1904–1906
F	1701–1709 1901	
IC	1701	
R	1703–1729 1801–1818	1706, 1709, 1712, 1719–1722, 1724 1806

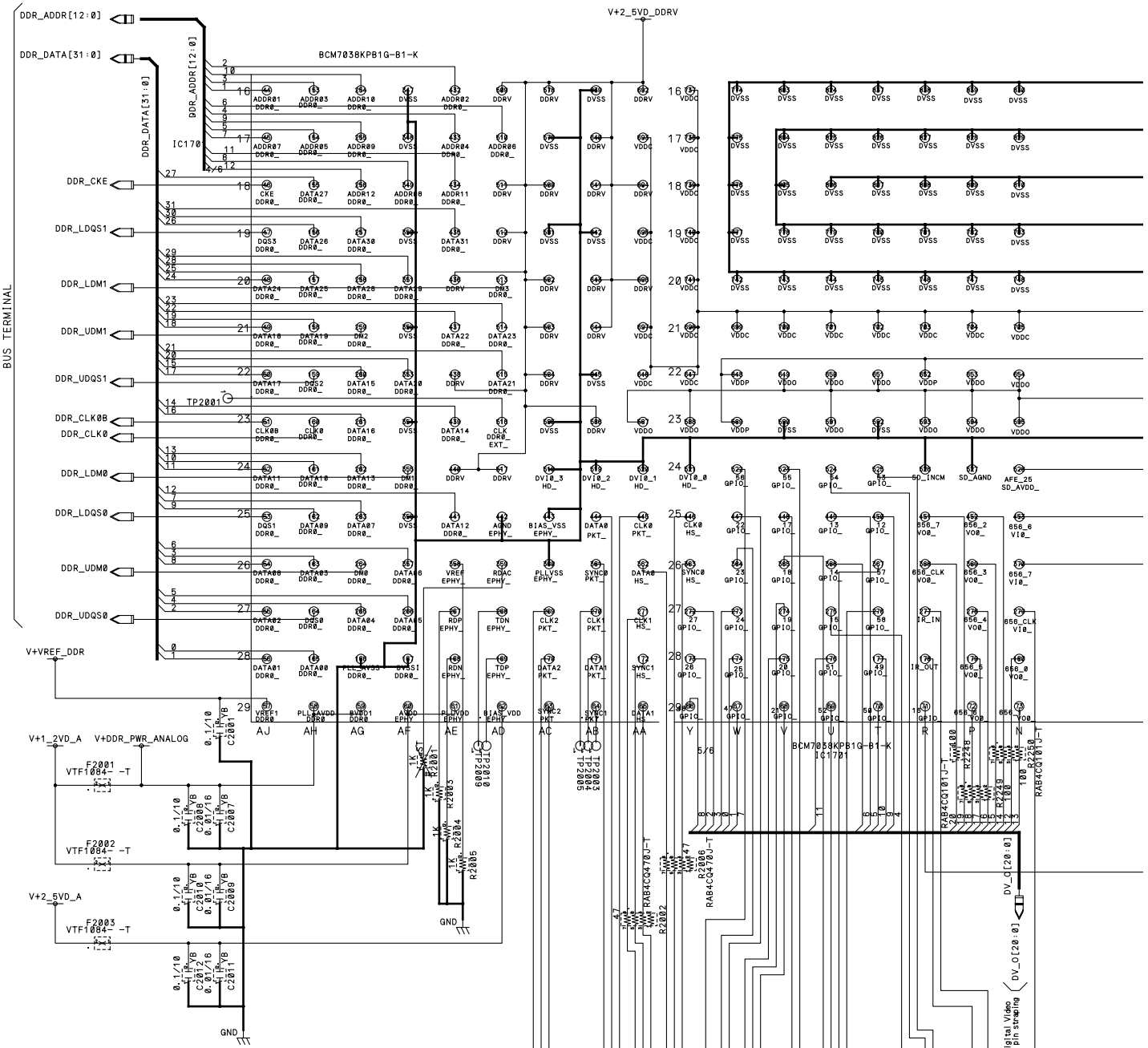
X : Don't mount


PCI_CLK_OUT
GND_Line guard
PCI_AD[31:0]
I2S Audio
Audio A/D
V+2_5VD_A
V+1_2VD_A
V+3_3VA_B
V+3_3VD_A1
GND
Analog Audio_1
Analog Audio_0
RESET
JTAG
POD
PCI
PCI_CBE[3:0]
F1701
F1702
F1703
F1704
F1705
F1706
F1708
F1709
R1730
R1705
R1714
R1718
R1717
R1713
R1711
R1726
R1715
R1716
R1712
R1722
R1704
R1724
OPT_OUT
SPDIF OUT
RESET_N
RESET2_N
TP1730 Aside
TP1731 Bside
7038_27MHZ
JTAG_TRST
JTAG_F7038_T3517
JTAG_TMS
JTAG_TCK
JTAG_FEXT_T7038
JTAG_TDI
EJTAG_TCK
EJTAG_TMS
JTAG_TDO
PCI_RST_N
PCI_GNT1_N
PCI_REQ1_N
PCI_INT
PCI_PAR
PCI_SERR_N
PCI_PERR_N
PCI_STOP_N
PCI_DEVSEL_N
PCI_TRDY_N
PCI_IRDY_N
PCI_FRAME_N

3.9 MR DTB ASSY (8/14)

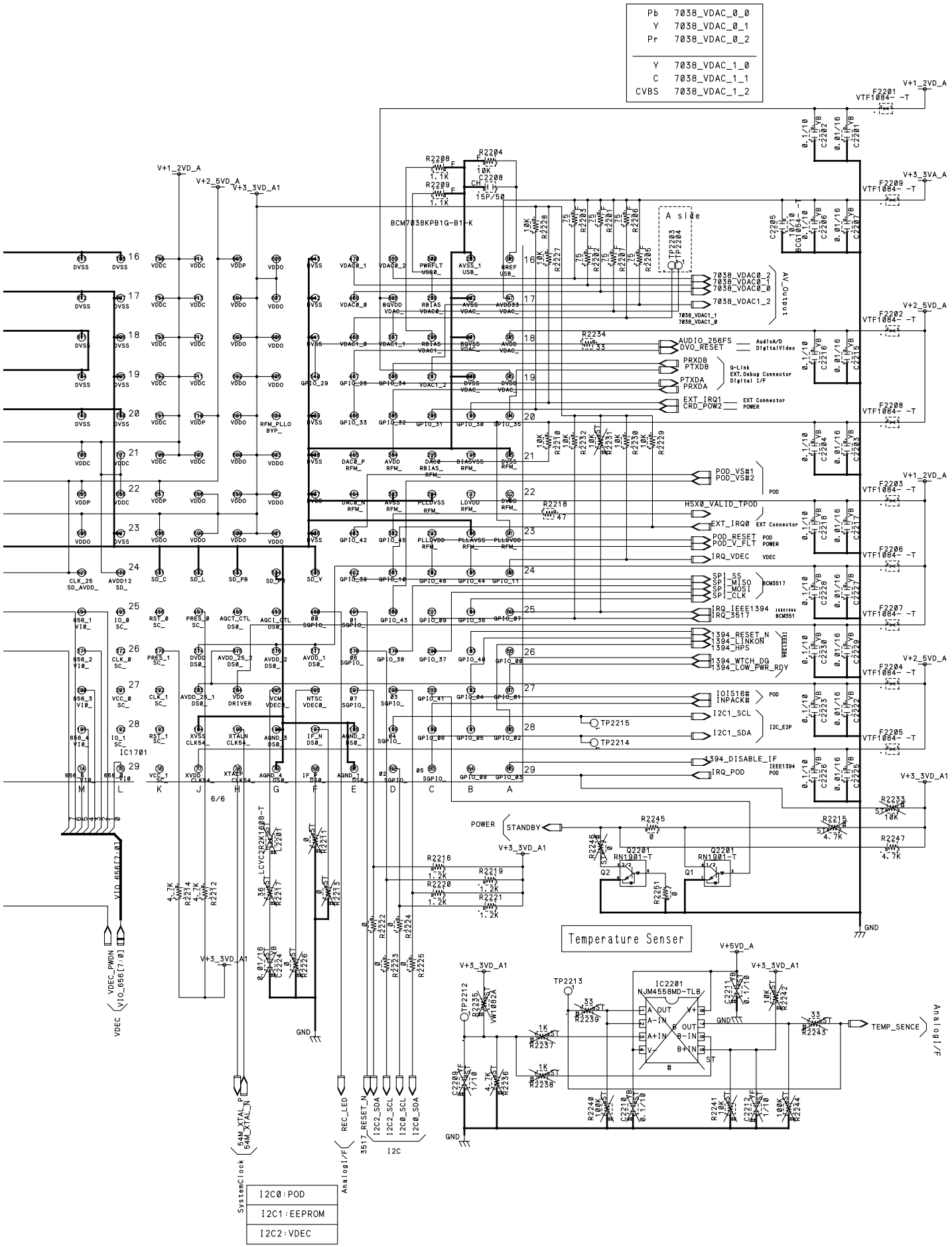
MR DTB ASSY (8/14)

• BACK END BLOCK (2/2)



ITEM	USED	VACANT
C	2001-2012 2201-2230	2002-2006 2209-2214, 2219-2221, 2224
F	2001-2003 2201-2209	
IC	1701	
Q	2201	
R	2002-2006 2201-2251	2211, 2213, 2215, 2217, 2226 2231, 2233, 2235-2244, 2246

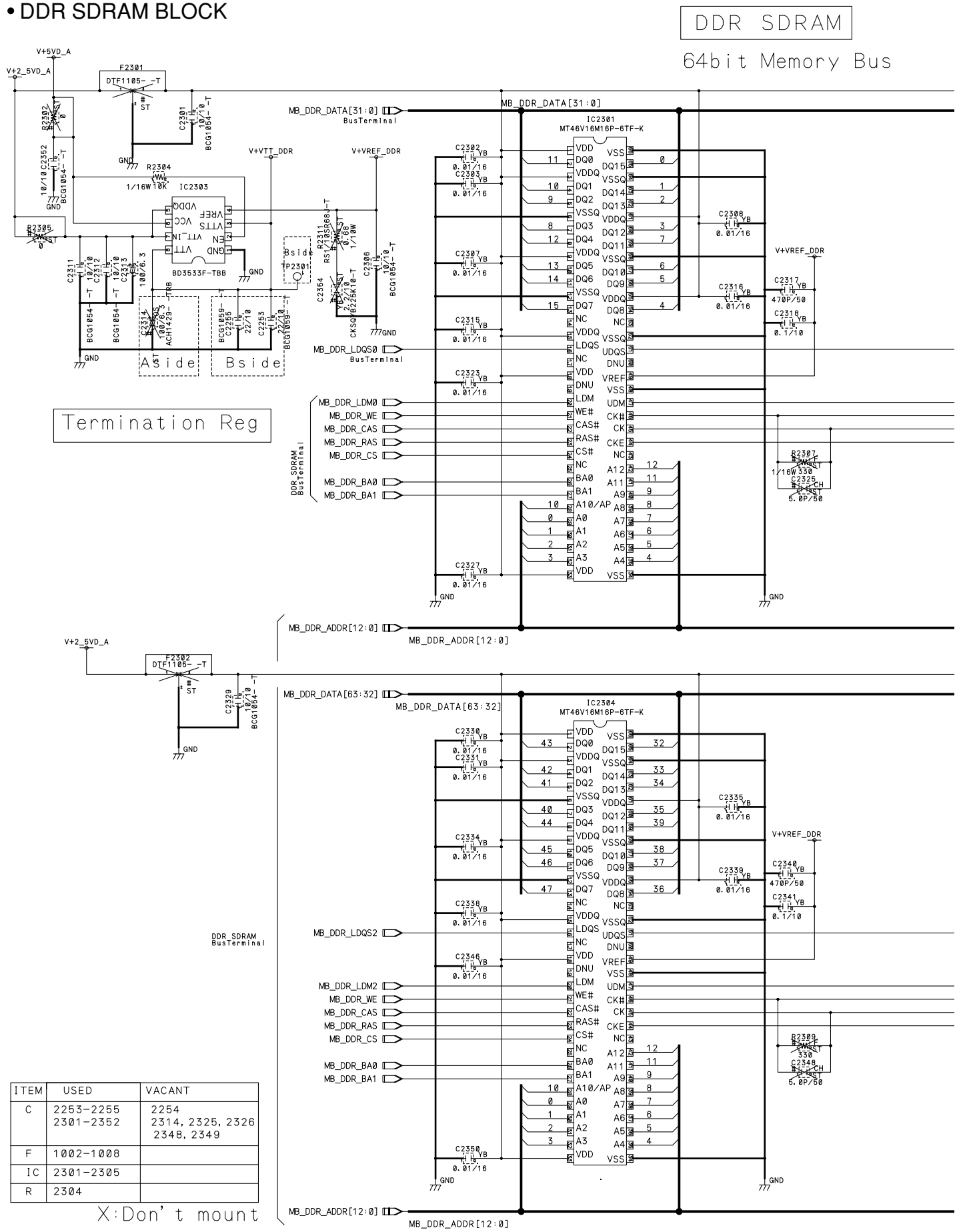
X : Don't mount


Pb 7038_VDAC_0_0
Y 7038_VDAC_0_1
Pr 7038_VDAC_0_2
Y 7038_VDAC_1_0
C 7038_VDAC_1_1
CVBS 7038_VDAC_1_2
BCM7038KPB1G-B1-K
A side
AV_Output
AUDIO_256FS
DVO_RESET
PRXDB
PTXDB
PTXDA
PRXDA
EXT_IRQ1
CRD_POW2
POD_VS#1
POD_VS#2
HSX0_VALID_TPOD
EXT_IRQ0
POD_RESET
POD_V_FLT
IRQ_VDEC
SPI_SS
SPI_MISO
SPI_MOSI
SPI_CLK
IRQ_IEEE1394
IRQ_3517
1394_RESET_N
1394_LINKON
1394_HPS
1394_WTCH_DG
1394_LOW_PWR_RDY
IOIS16#
INPACK#
I2C1_SCL
I2C1_SDA
1394_DISABLE_IF
IRQ_POD
IC1701
IC2201
NJM4558MD-TLB
Temperature Senser
TEMP_SENCE
Analog I/F
POWER
STANDBY
VDEC_PWDN
VDEC
REC_LED
3517_RESET_N
I2C2_SDA
I2C2_SCL
I2C0_SCL
I2C0_SDA
I2C
54M_XTAL_P
54M_XTAL_N
SystemClock
I2C0 : POD
I2C1 : EEPROM
I2C2 : VDEC
GND
V+1_2VD_A
V+2_5VD_A
V+3_3VD_A1
V+3_3VA_A
V+5VD_A

3.10 MR DTB ASSY (9/14)

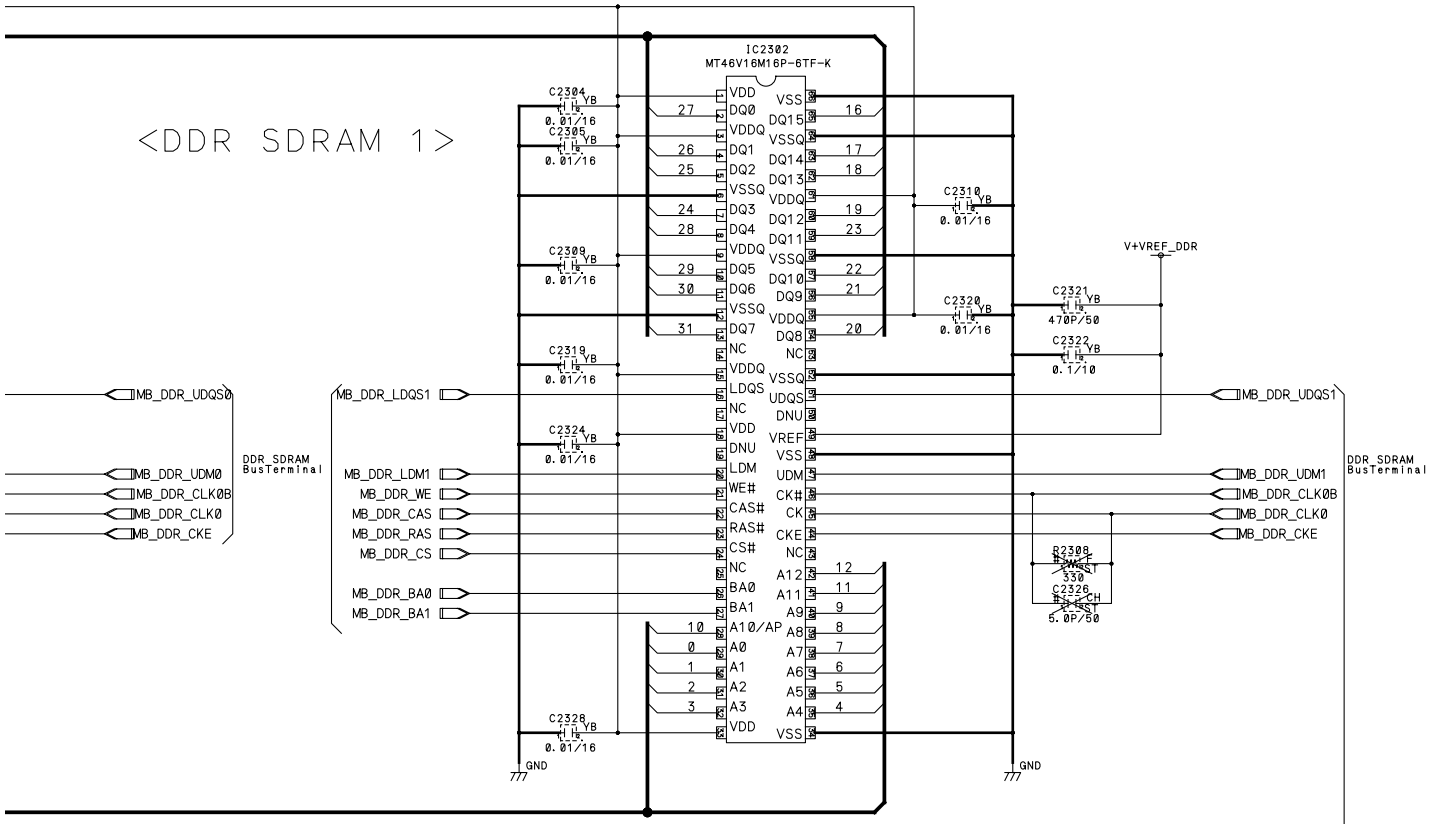
MR DTB ASSY (9/14)

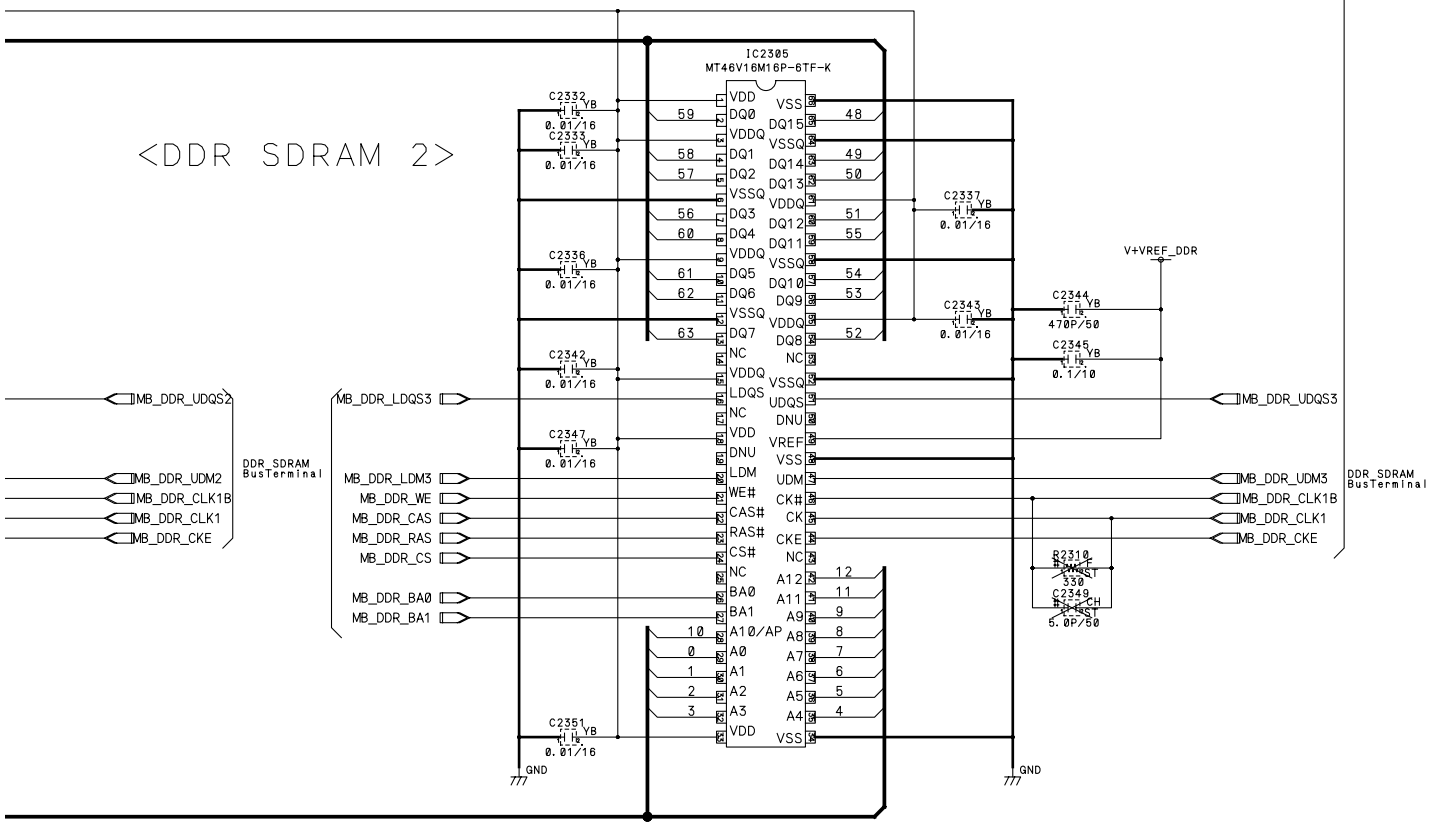
• DDR SDRAM BLOCK



ITEM	USED	VACANT
C	2253-2255 2301-2352	2254 2314, 2325, 2326 2348, 2349
F	1002-1008	
IC	2301-2305	
R	2304	

X:Don't mount

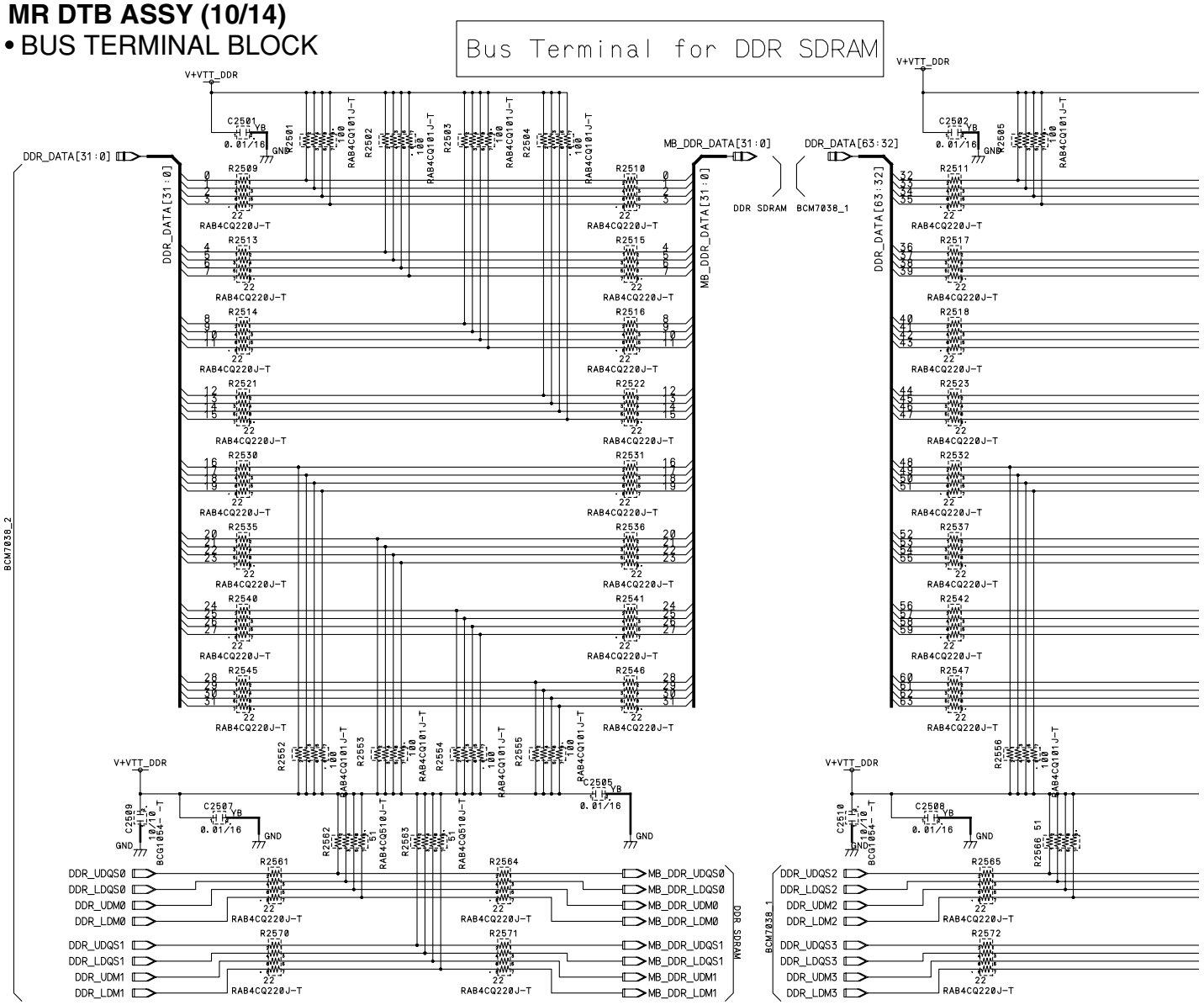

<DDR SDRAM 1>
IC2302
MT46V16M16P-6TF-K
MB_DDR_UDQS0
MB_DDR_UDM0
MB_DDR_CLK0B
MB_DDR_CLK0
MB_DDR_CKE
MB_DDR_LDQS1
MB_DDR_LDM1
MB_DDR_WE
MB_DDR_CAS
MB_DDR_RAS
MB_DDR_CS
MB_DDR_BA0
MB_DDR_BA1
DDR_SDRAM BusTerminal
V+VREF_DDR
MB_DDR_UDQS1
MB_DDR_UDM1
MB_DDR_CLK0B
MB_DDR_CLK0
MB_DDR_CKE
GND

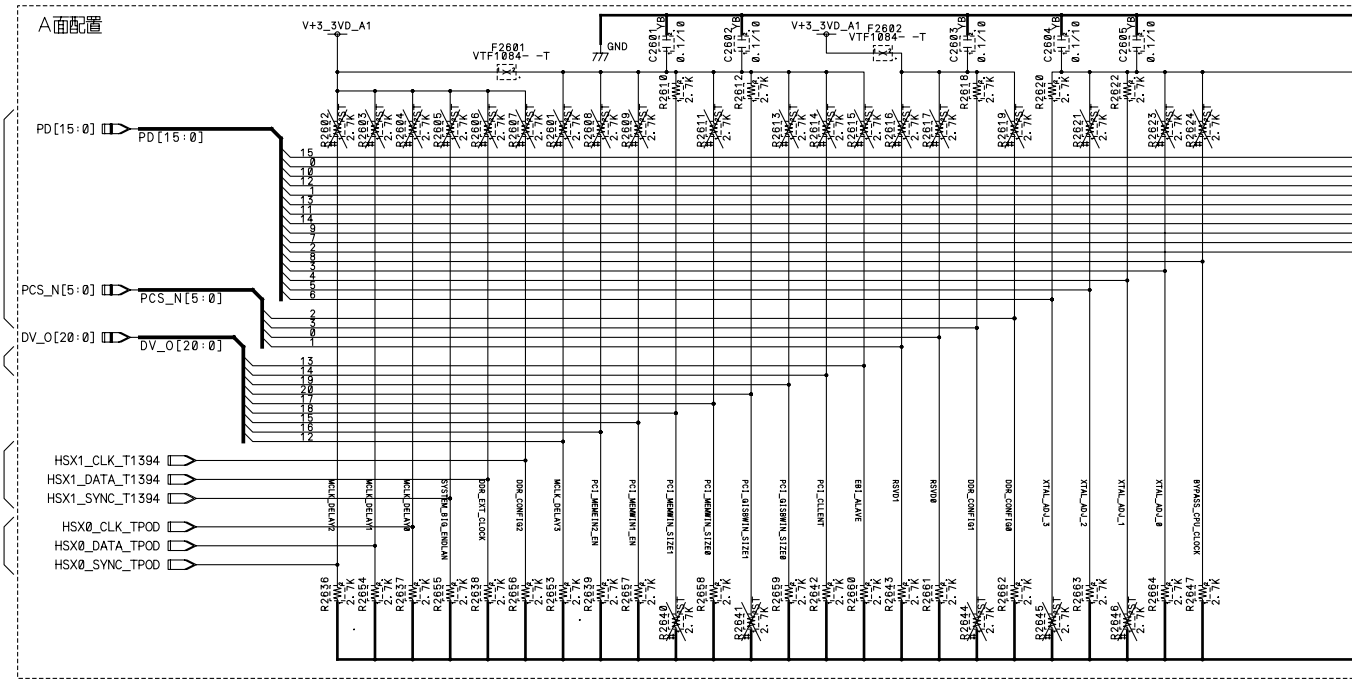

<DDR SDRAM 2>
IC2305
MT46V16M16P-6TF-K
MB_DDR_UDQS2
MB_DDR_UDM2
MB_DDR_CLK1B
MB_DDR_CLK1
MB_DDR_CKE
MB_DDR_LDQS3
MB_DDR_LDM3
MB_DDR_WE
MB_DDR_CAS
MB_DDR_RAS
MB_DDR_CS
MB_DDR_BA0
MB_DDR_BA1
DDR_SDRAM BusTerminal
V+VREF_DDR
MB_DDR_UDQS3
MB_DDR_UDM3
MB_DDR_CLK1B
MB_DDR_CLK1
MB_DDR_CKE
GND

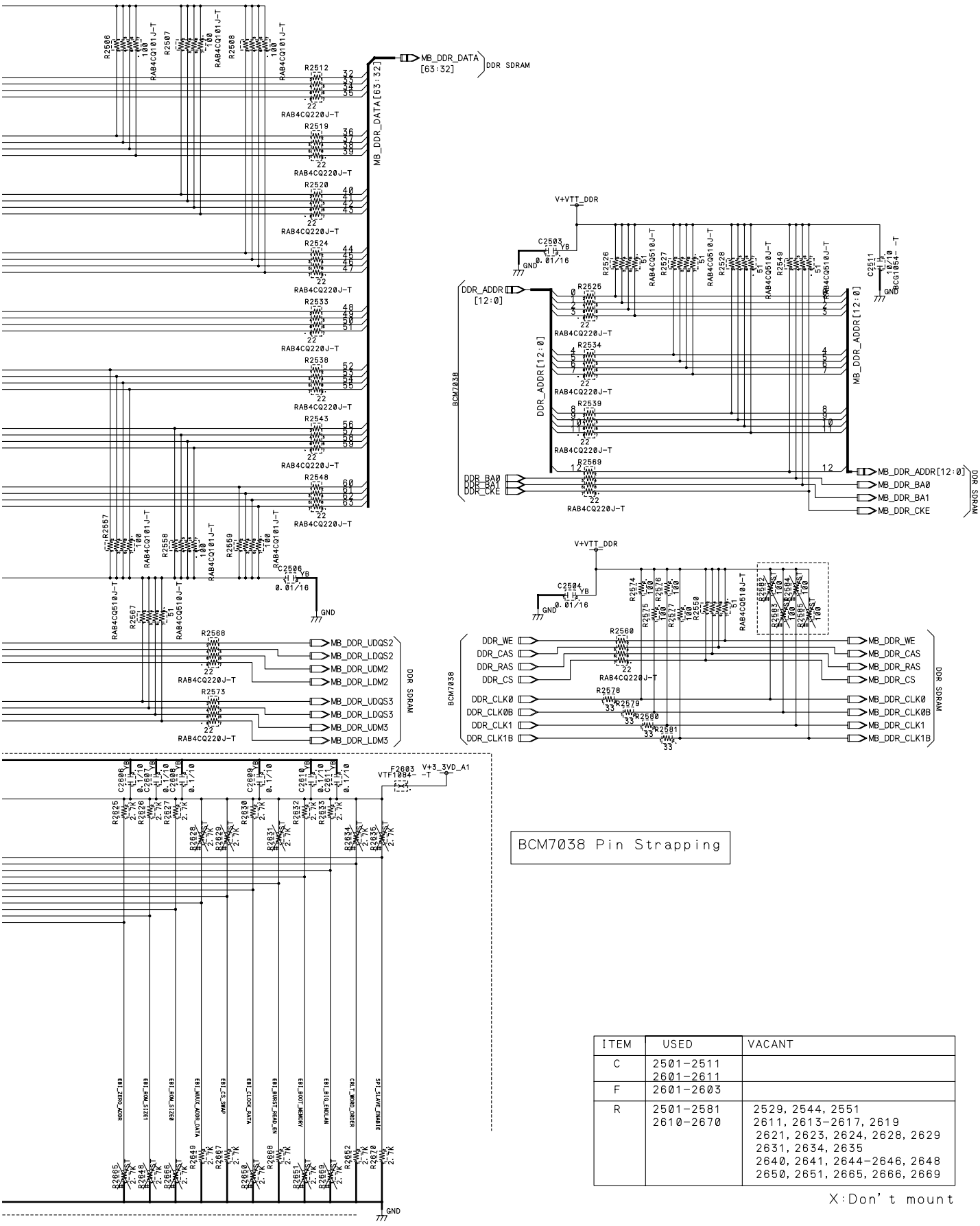
3.11 MR DTB ASSY (10/14)

MR DTB ASSY (10/14)

• BUS TERMINAL BLOCK







BCM7038 Pin Strapping

ITEM	USED	VACANT
C	2501-2511 2601-2611	
F	2601-2603	
R	2501-2581 2610-2670	2529, 2544, 2551 2611, 2613-2617, 2619 2621, 2623, 2624, 2628, 2629 2631, 2634, 2635 2640, 2641, 2644-2646, 2648 2650, 2651, 2665, 2666, 2669

X:Don't mount

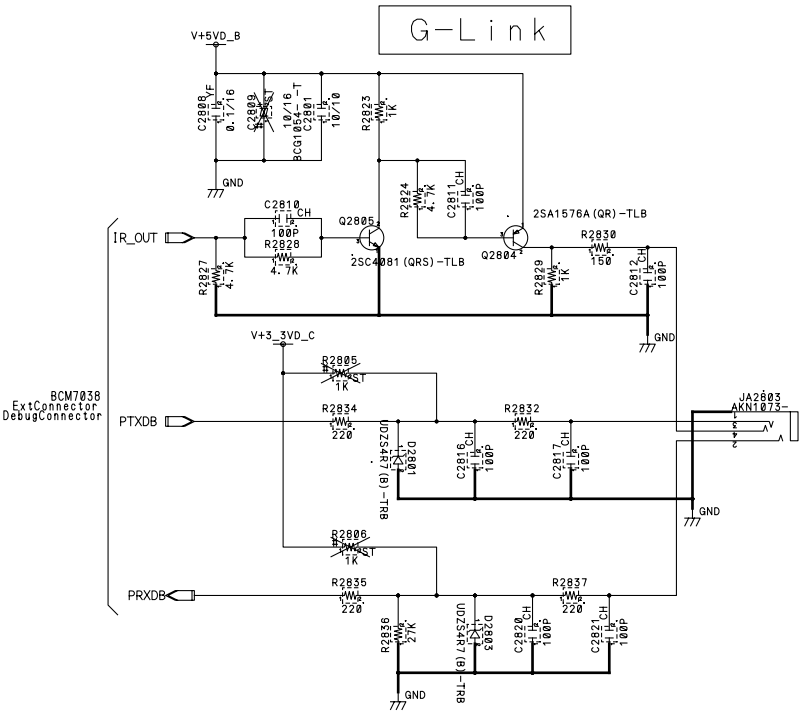
3.12 MR DTB ASSY (11/14)

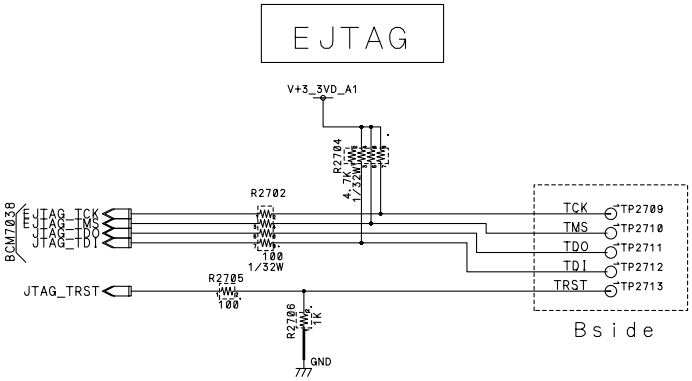
MR DTB ASSY (11/14)

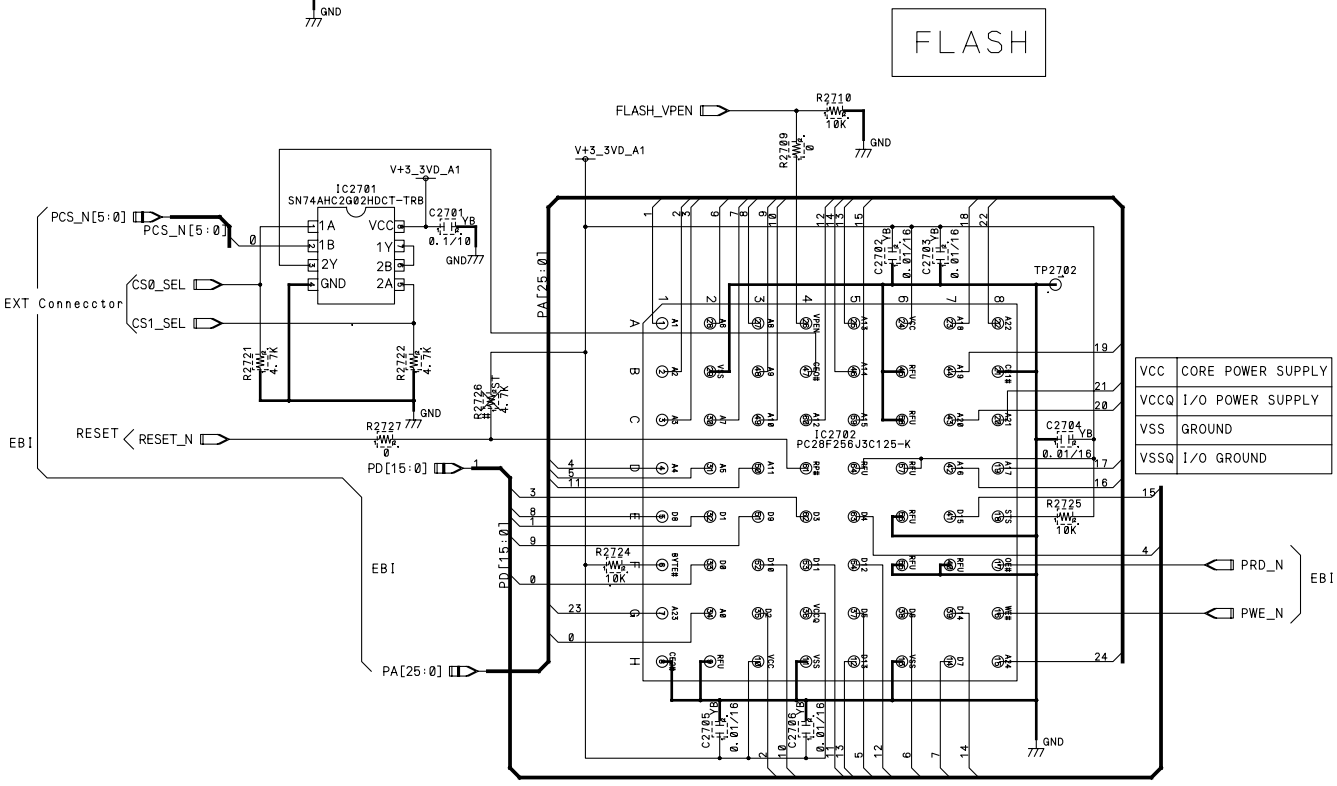
• FLASH, E2P BLOCK

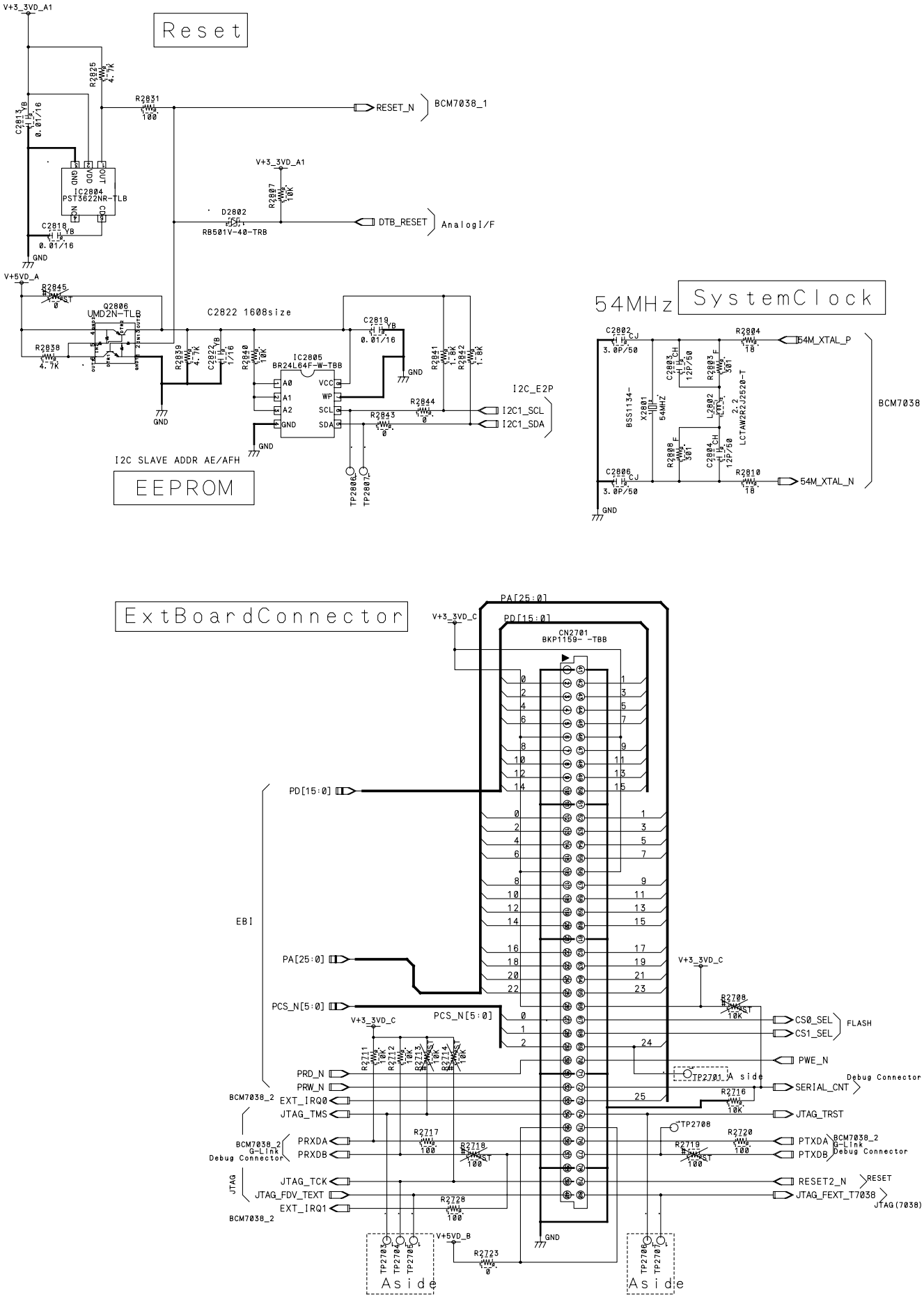
ITEM	USED	VACANT
C	2701-2706 2801-2822	2805, 2807, 2809, 2814, 2815
CN	2701	
D	2801-2803	
IC	2701, 2702 2804, 2805	
JA	2803	
L	2802	
Q	2804-2806	
R	2702-2728 2803-2844	2703, 2707, 2708, 2713-2715 2718, 2719, 2726 2805, 2806, 2809, 2811-2822 2826, 2833
X	2801	

X : Don't mount





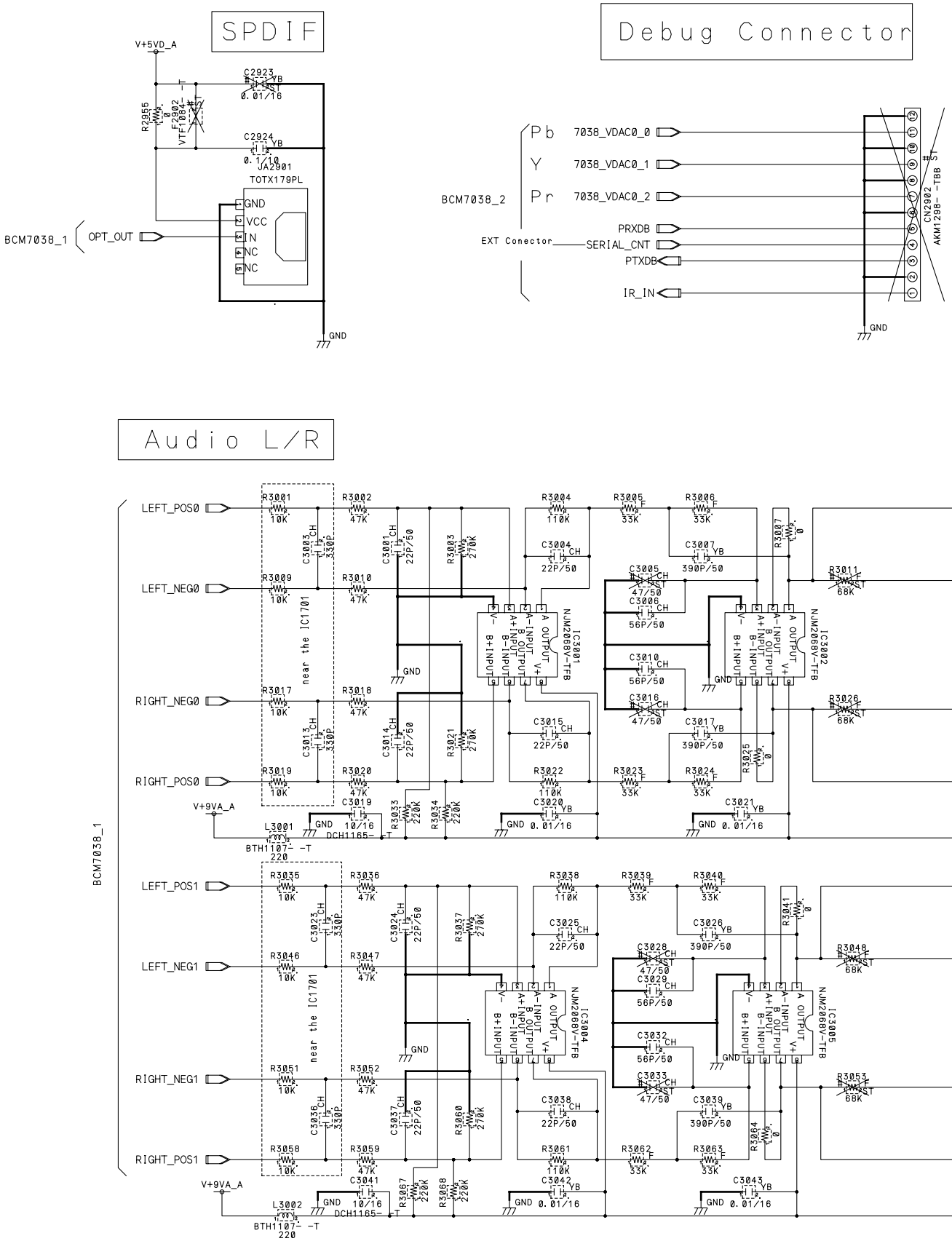



Reset
V+3_3VD_A1
R2825 4.7K
C2813 0.01/16
R2831 100
RESET_N
BCM7038_1
IC2804 PST3622NR-TLB
GND
VDD
OUT
C2818 0.01/16
D2802 RB501V-40-TRB
DTB_RESET
AnalogI/F
R2807 10K
V+5VD_A
R2845 0
Q2806 UMD2N-TLB
C2822 1608size
C2819 0.01/16
R2838 4.7K
R2839 4.7K
C2822 1/16
R2840 10K
IC2805 BR24L64F-W-TBB
A0
A1
A2
GND
VCC
WP
SCL
SDA
R2841 1.8K
R2842 1.8K
R2844 0
R2843 0
I2C_E2P
I2C1_SCL
I2C1_SDA
I2C SLAVE ADDR AE/AFH
EEPROM
TP2806
TP2807
54MHz SystemClock
C2802 3.0P/50
C2803 12P/50
R2803 301
R2804 18
54M_XTAL_P
BSS1134-
X2801 54MHZ
L2802 2.2
LCTAW2R2J2520-T
C2804 12P/50
R2808 301
C2806 3.0P/50
R2810 18
54M_XTAL_N
BCM7038
ExtBoardConnector
PA[25:0]
PD[15:0]
V+3_3VD_C
CN2701 BKP1159- -TBB
EBI
PCS_N[5:0]
R2711 10K
R2712 10K
R2713 10K
R2714 10K
R2708 10K
CS0_SEL
CS1_SEL
FLASH
PWE_N
PRD_N
PRW_N
EXT_IRQ0
JTAG_TMS
BCM7038_2
TP2701 A side
Debug Connector
SERIAL_CNT
R2716 10K
JTAG_TRST
TP2708
R2717 100
R2718 100
R2720 100
R2719 100
PRXDA
PRXDB
PTXDA
PTXDB
BCM7038_2 G-Link Debug Connector
JTAG
JTAG_TCK
JTAG_FDV_TEXT
EXT_IRQ1
R2728 100
RESET2_N
RESET
JTAG_FEXT_T7038
JTAG(7038)
V+5VD_B
R2723 0
TP2703
TP2704
TP2705
A side
TP2706
TP2707
A side

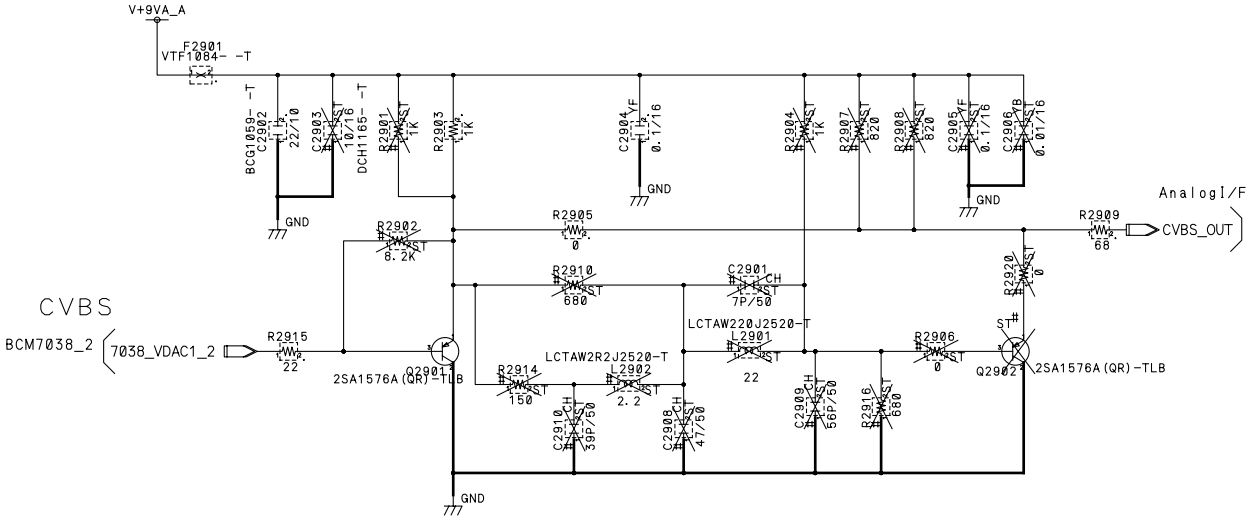
3.13 MR DTB ASSY (12/14)

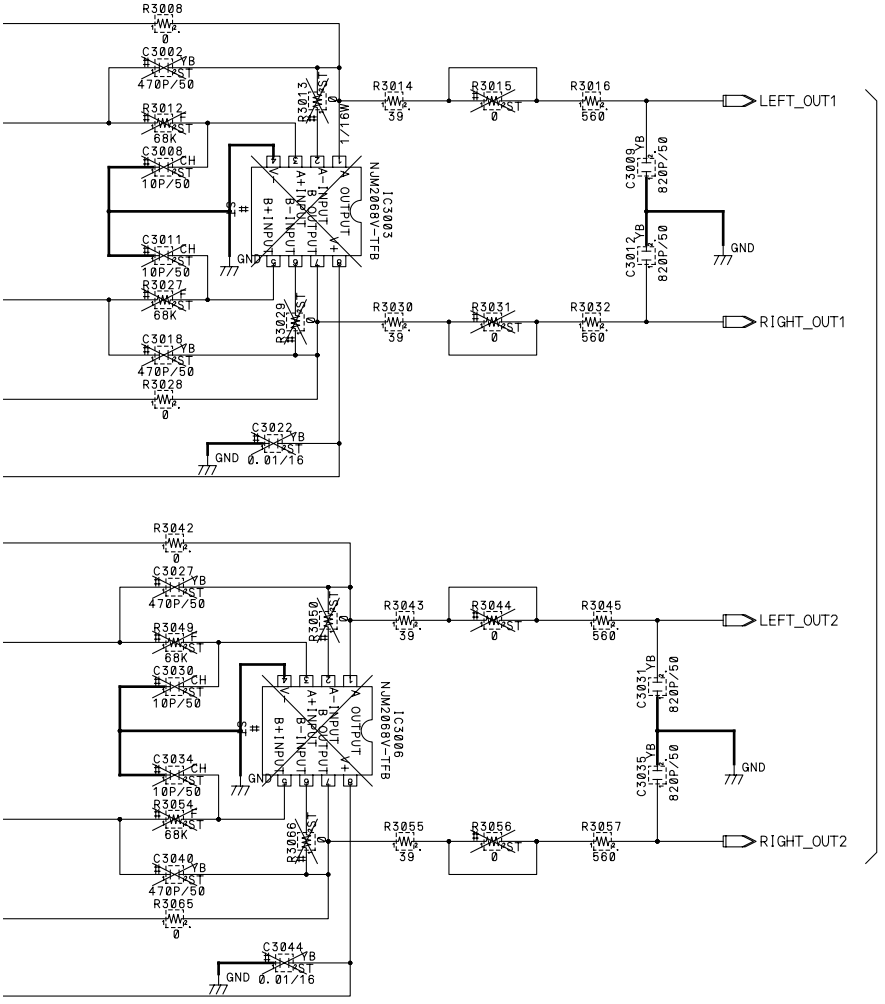
MR DTB ASSY (12/14)

• A/V OUT BLOCK



Video





ITEM	USED	VACANT
C	2902-2924 3001-3043	2903, 2905-2923 3002, 3005, 3008, 3011, 3016 3018, 3022, 3027, 3028, 3030 3033, 3034, 3040
F	2901	
IC	3001-3005	3003
JA	2901	
L	3001, 3002	
Q	2901	
R	2903-2915 2955 3001-3068	2904, 2906-2908, 2910-2914 3011-3013, 3015, 3026, 3027 3029, 3031, 3044, 3048-3050 3053, 3054, 3056, 3066

X : Don't mount

3.14 MR DTB ASSY (13/14)

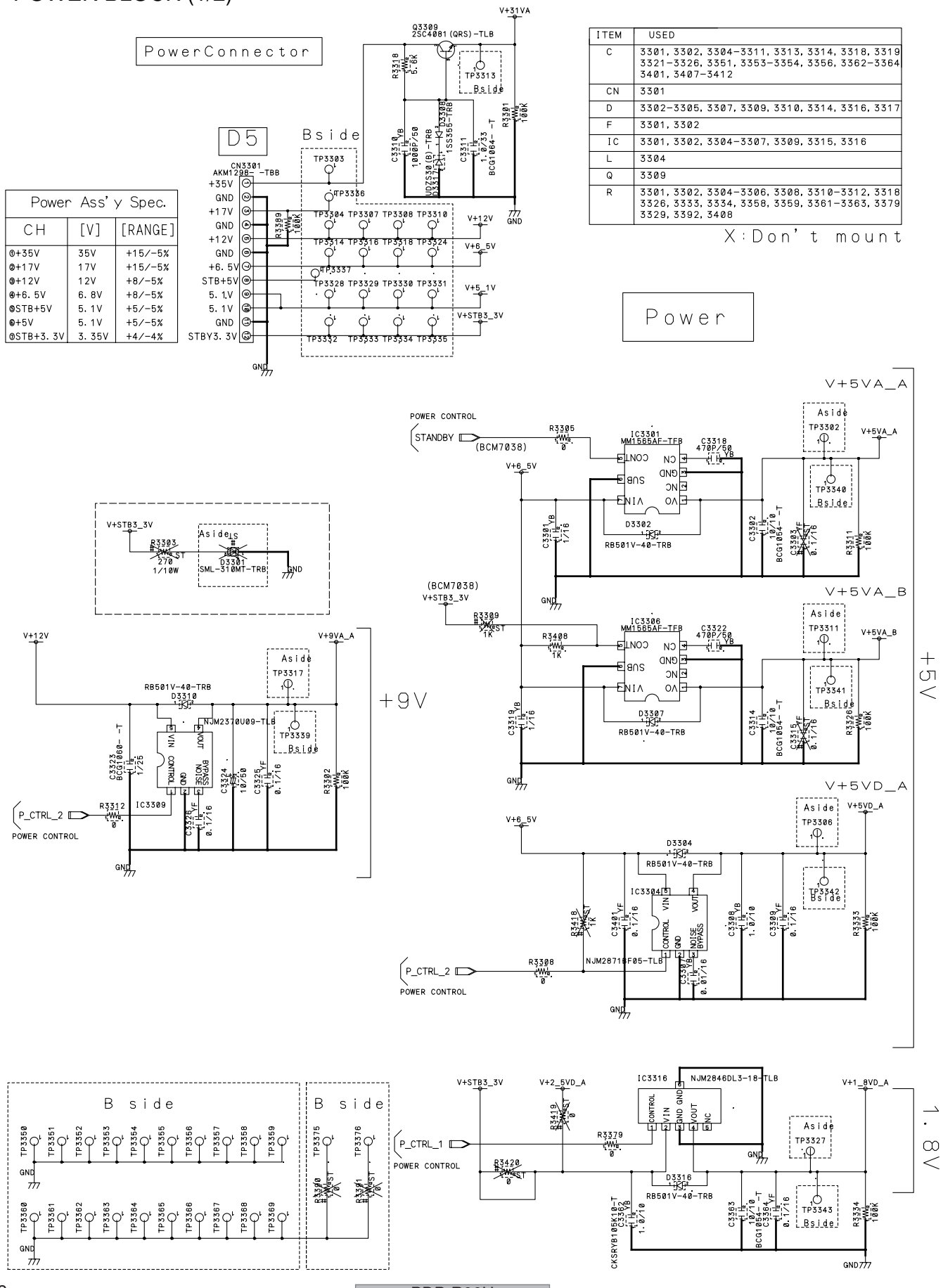
MR DTB ASSY (13/14)

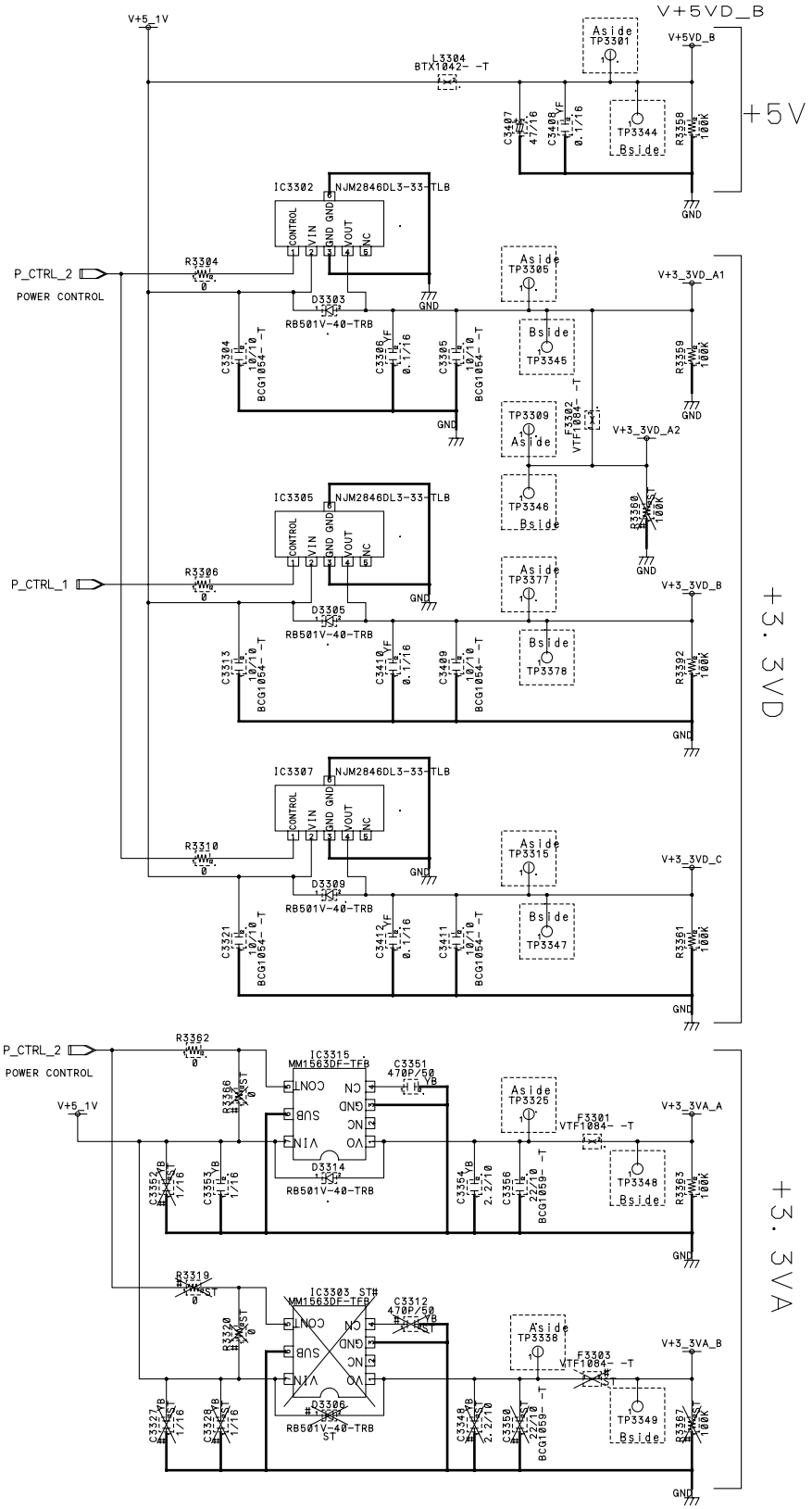
• POWER BLOCK (1/2)

Power Ass'y Spec.		
CH	[V]	[RANGE]
①+35V	35V	+15/−5%
②+17V	17V	+15/−5%
③+12V	12V	+8/−5%
④+6.5V	6.8V	+8/−5%
⑤STB+5V	5.1V	+5/−5%
⑥+5V	5.1V	+5/−5%
⑦STB+3.3V	3.35V	+4/−4%

ITEM	USED
C	3301, 3302, 3304−3311, 3313, 3314, 3318, 3319 3321−3326, 3351, 3353−3354, 3356, 3362−3364 3401, 3407−3412
CN	3301
D	3302−3305, 3307, 3309, 3310, 3314, 3316, 3317
F	3301, 3302
IC	3301, 3302, 3304−3307, 3309, 3315, 3316
L	3304
Q	3309
R	3301, 3302, 3304−3306, 3308, 3310−3312, 3318 3326, 3333, 3334, 3358, 3359, 3361−3363, 3379 3329, 3392, 3408

X:Don't mount

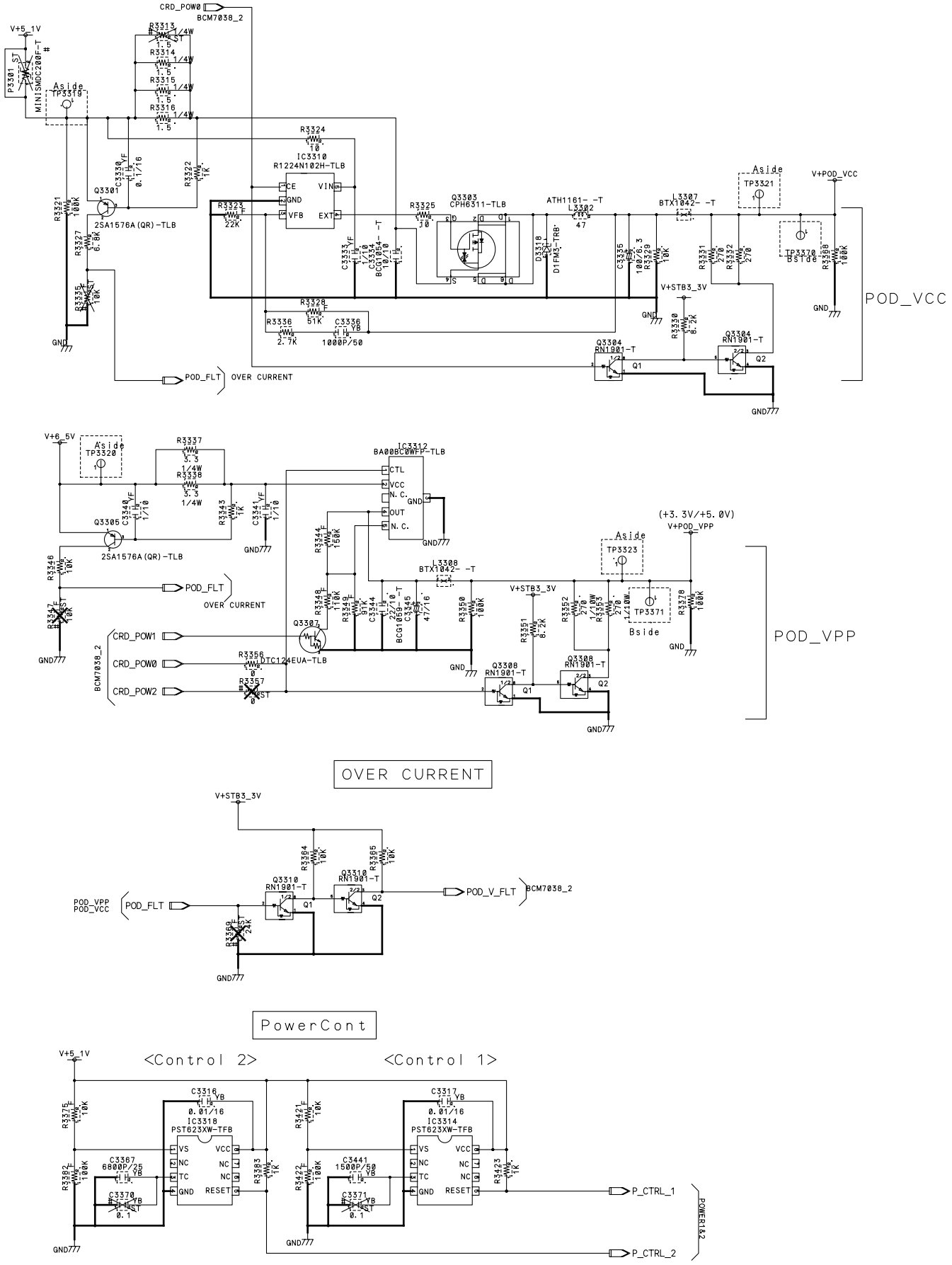



V+5VD_B
+5V
+3.3VD
+3.3VA
P_CTRL_2
POWER CONTROL
P_CTRL_1
V+5_1V
IC3302 NJM2846DL3-33-TLB
IC3305 NJM2846DL3-33-TLB
IC3307 NJM2846DL3-33-TLB
IC3315 MM1563DF-TFB
IC3303 ST# MM1563DF-TFB
D3303 RB501V-40-TRB
D3305 RB501V-40-TRB
D3309 RB501V-40-TRB
D3314 RB501V-40-TRB
D3306 RB501V-40-TRB
L3304 BTX1042- -T
F3302 VTF1084- -T
F3301 VTF1084- -T
F3303 VTF1084- -T
V+3_3VD_A1
V+3_3VD_A2
V+3_3VD_B
V+3_3VD_C
V+3_3VA_A
V+3_3VA_B
GND
Aside TP3301
Bside TP3344
Aside TP3305
Bside TP3345
Aside TP3309
Bside TP3346
Aside TP3377
Bside TP3378
Aside TP3315
Bside TP3347
Aside TP3325
Bside TP3348
Aside TP3335
Bside TP3349

3.15 MR DTB ASSY (14/14)

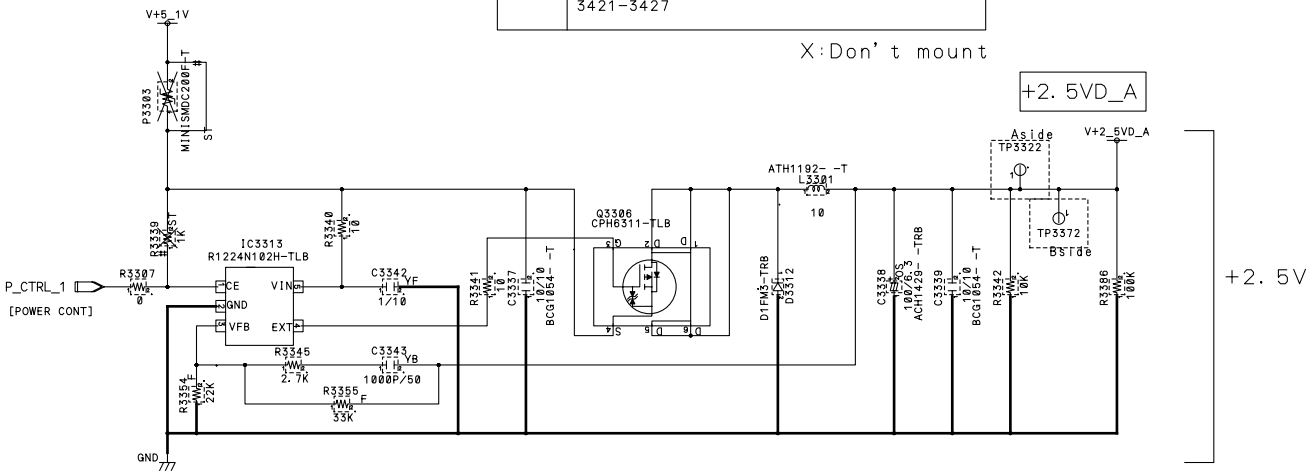
MR DTB ASSY (14/14)

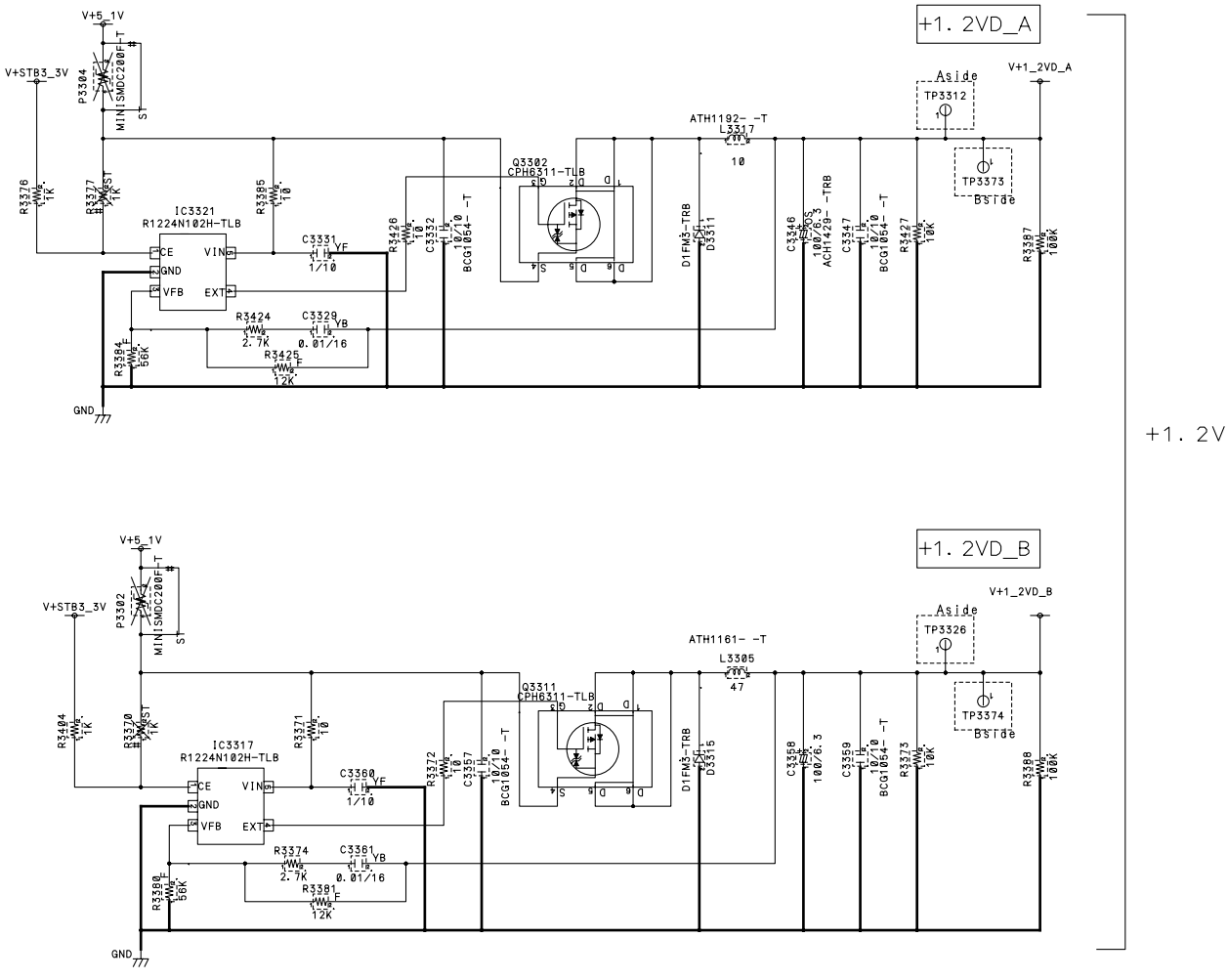
• POWER BLOCK (2/2)



ITEM	USED
C	3316, 3317, 3329-3347, 3357-3361, 3367, 3341 3321-3326, 3351, 3353-3354, 3356, 3362-3364 3401, 3407-3412
D	3311, 3312, 3315, 3318
IC	3310, 3312-3314, 3317, 3318, 3321
L	3301, 3302, 3305, 3307, 3308, 3317
Q	3301-3308, 3310, 3311
R	3307, 3314-3316, 3321-3325, 3327-3332 3336-3338, 3340-3346, 3348-3356, 3364, 3365 3368, 3371-3376, 3378, 3380, 3388, 3404, 3421-3427

X:Don't mount





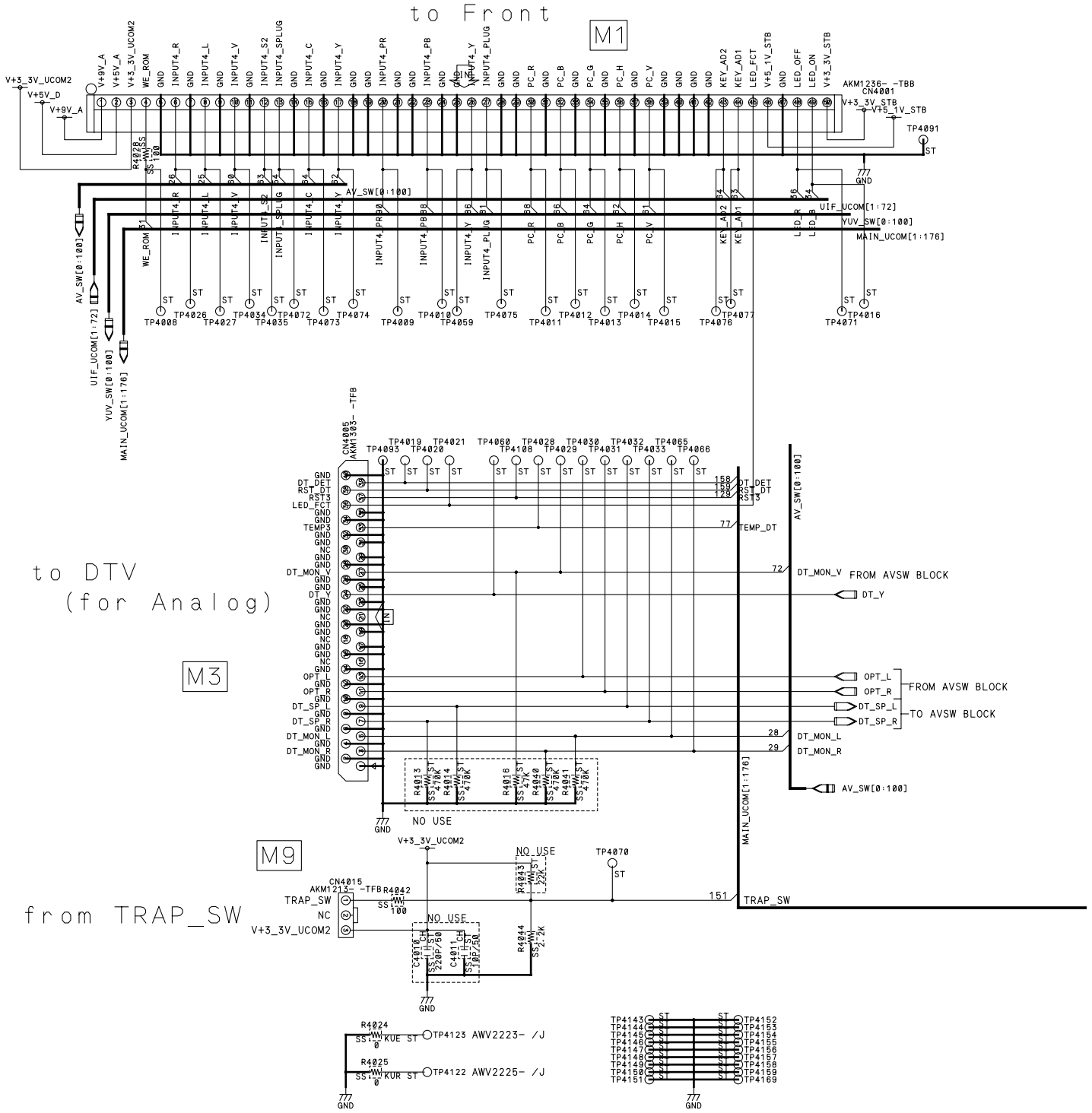
3.16 MR MAIN ASSY (1/16)

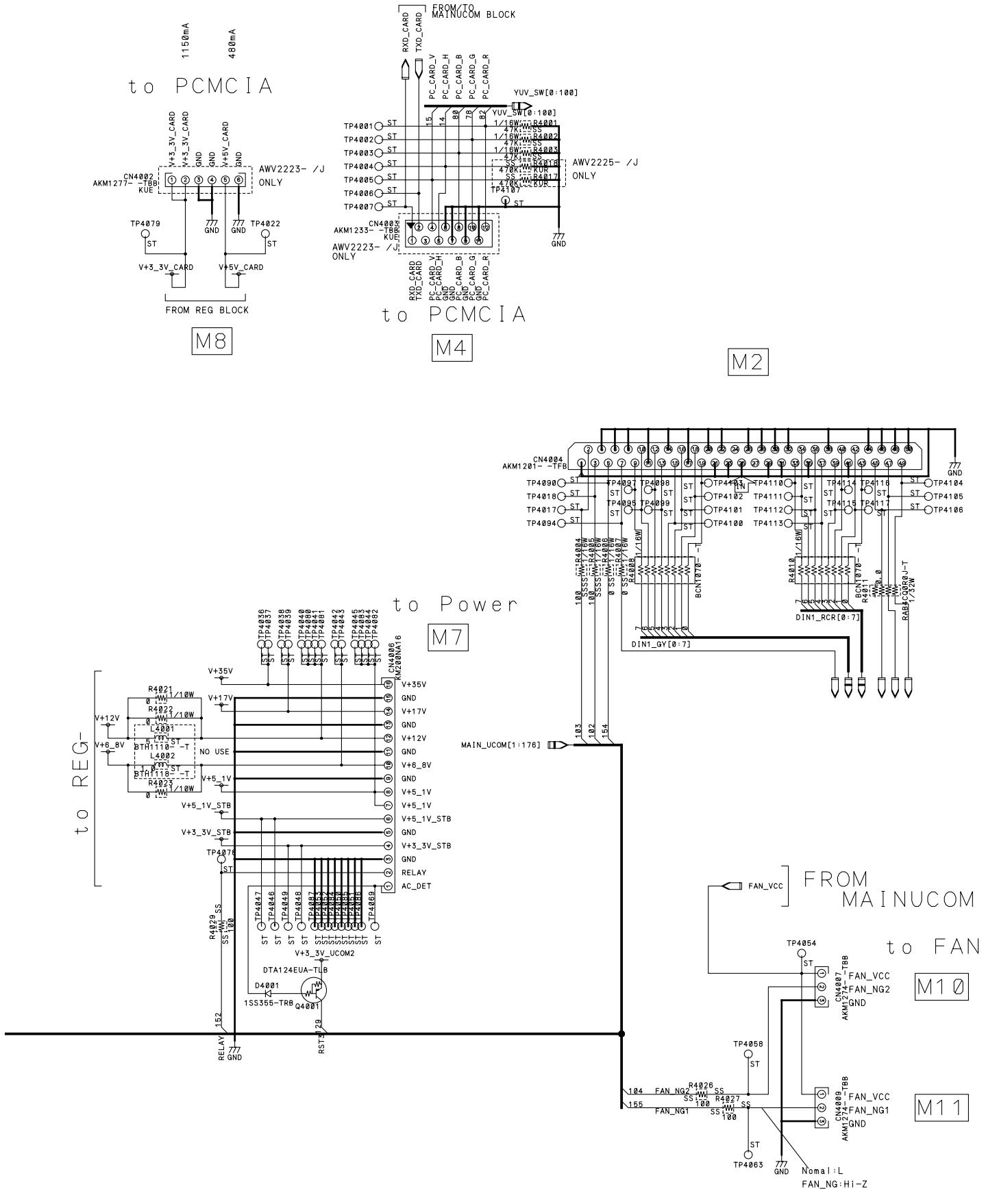
MR MAIN ASSY (1/16)

• BOARD IF BLOCK

NO_USE
[ ] : STANDBY

ITEM	USED	AWV2223- /J VACANT	AWV2225- /J VACANT
C	4010-4011		
CN	4001-4015	4008, 4010-4014,	4002-4003, 4008, 4010-4014,
D	4001-4001		
L	4001-4002		
Q	4001-4001		
R	4001-4044	4009, 4012, 4015, 4017-4020, 4025, 4030-4039,	4009, 4012, 4015, 4019-4020, 4024, 4030-4039,



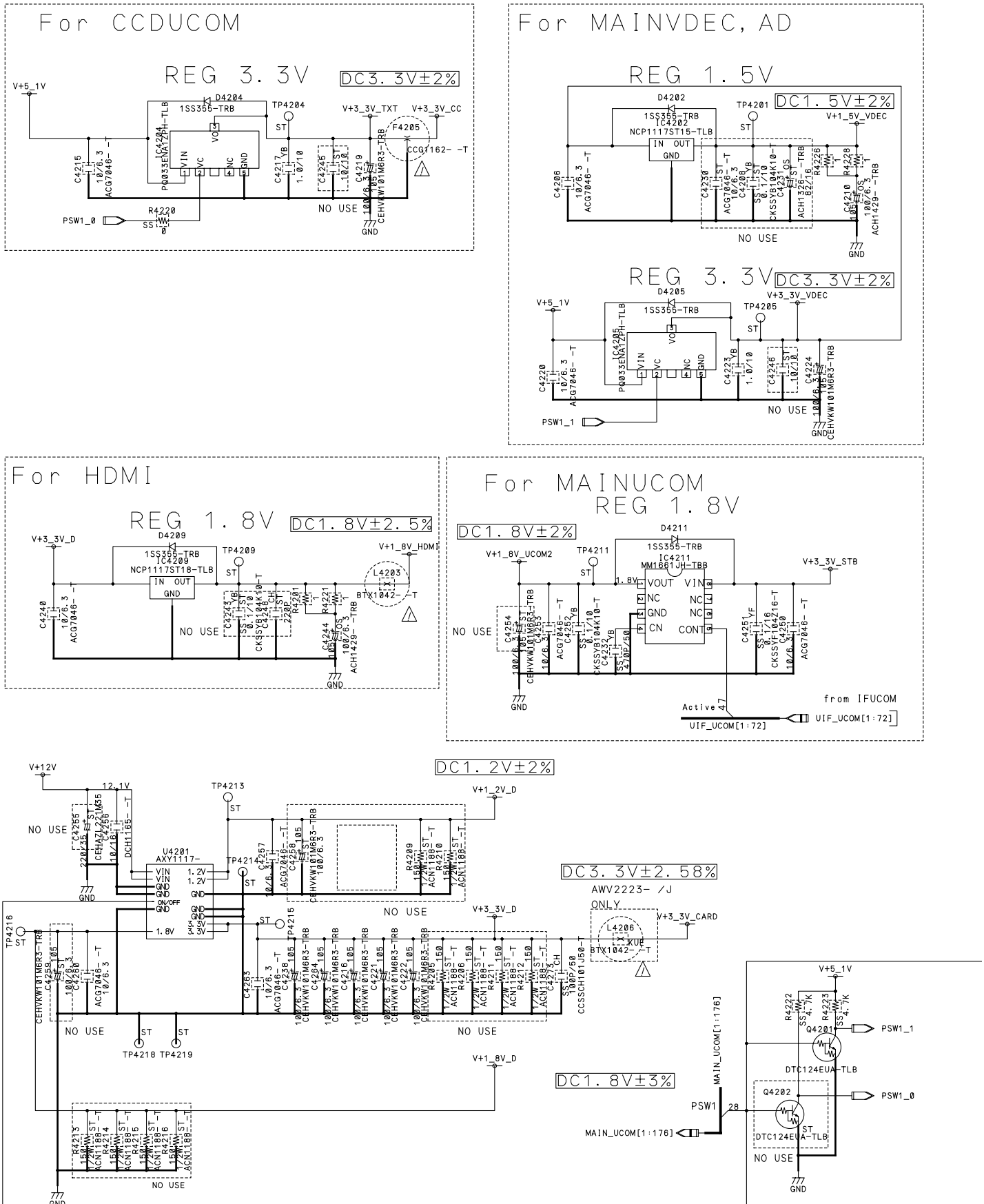

to PCMCIA
1150mA
480mA
V+3_3V_CARD
V+3_3V_CARD
GND
GND
V+5V_CARD
GND
CN4002
AKM1277- -TBB
KUE
AWV2223- /J
ONLY
TP4079
TP4022
FROM REG BLOCK
M8
FROM/TO
MAINUCOM BLOCK
RXD_CARD
TXD_CARD
PC_CARD_V
PC_CARD_H
PC_CARD_B
PC_CARD_G
PC_CARD_R
YUV_SW[0:100]
TP4001
TP4002
TP4003
TP4004
TP4005
TP4006
TP4007
AWV2225- /J
ONLY
TP4107
CN4003
AKM1233- -TBB
KUE
AWV2223- /J
ONLY
to PCMCIA
M4
M2
CN4004
AKM1201- -TFB
TP4090
TP4018
TP4017
TP4094
TP4097
TP4098
TP4095
TP4099
TP4102
TP4101
TP4100
TP4110
TP4111
TP4112
TP4113
TP4114
TP4116
TP4115
TP4117
TP4104
TP4105
TP4106
BCN1070- -T
DIN1_RCR[0:7]
DIN1_GY[0:7]
to Power
M7
CN4006
KM2000A16
V+35V
V+17V
V+12V
V+6_8V
V+5_1V
V+5_1V_STB
V+3_3V_STB
RELAY
AC_DET
to REG-
R4021
R4022
L4001
L4002
R4023
BTH1110- -T
BTH1118- -T
NO USE
V+3_3V_UCOM2
DTA124EUA-TLB
D4001
1SS355-TRB
Q4001
RELAY
RST
MAIN_UCOM[1:176]
FROM
MAINUCOM
FAN_VCC
to FAN
TP4054
CN4007
AKM1274- -TBB
FAN_VCC
FAN_NG2
GND
M10
TP4058
CN4009
AKM1274- -TBB
FAN_VCC
FAN_NG1
GND
M11
FAN_NG2
FAN_NG1
R4026
R4027
TP4063
Nomal:L
FAN_NG:Hi-Z

3.17 MR MAIN ASSY (2/16)

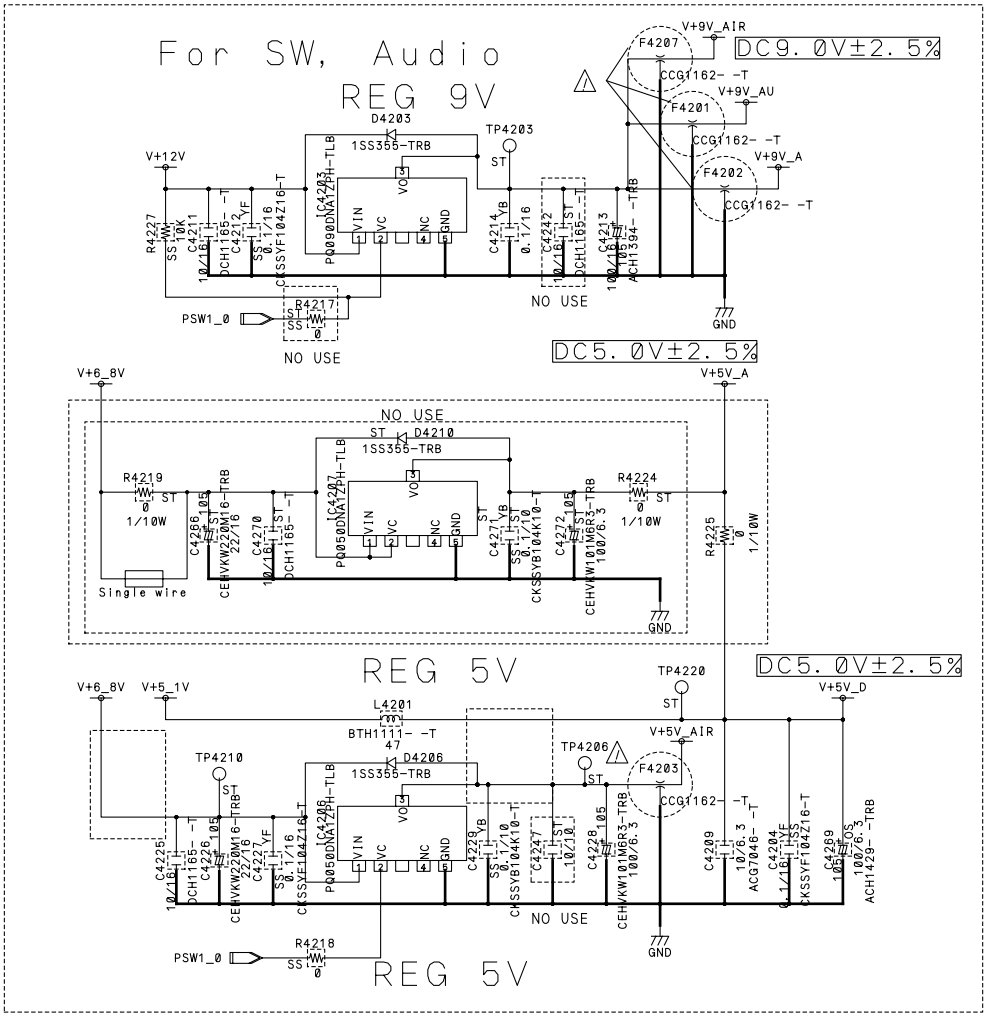
MR MAIN ASSY (2/16)

• REG BLOCK

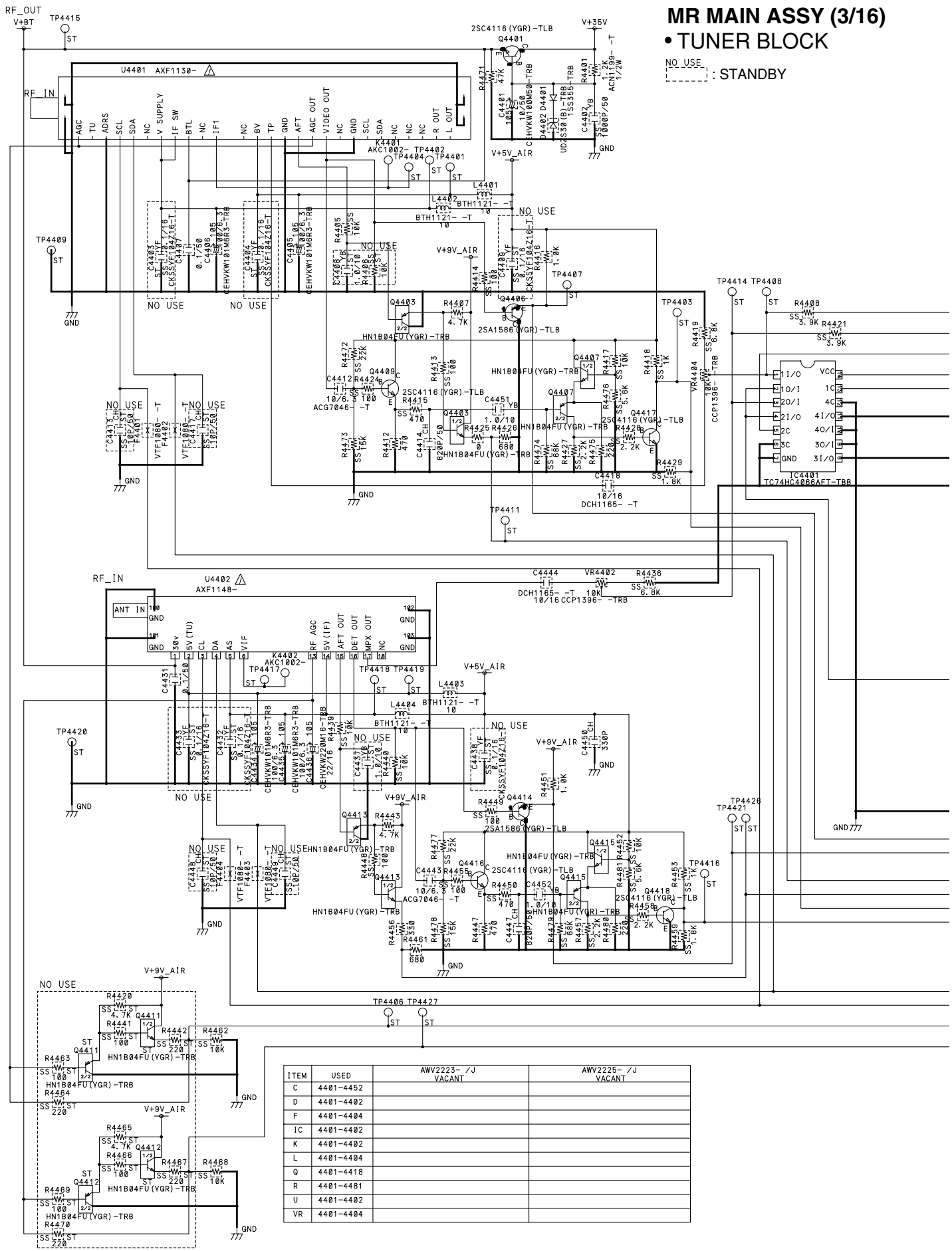
NO USE : STANDBY



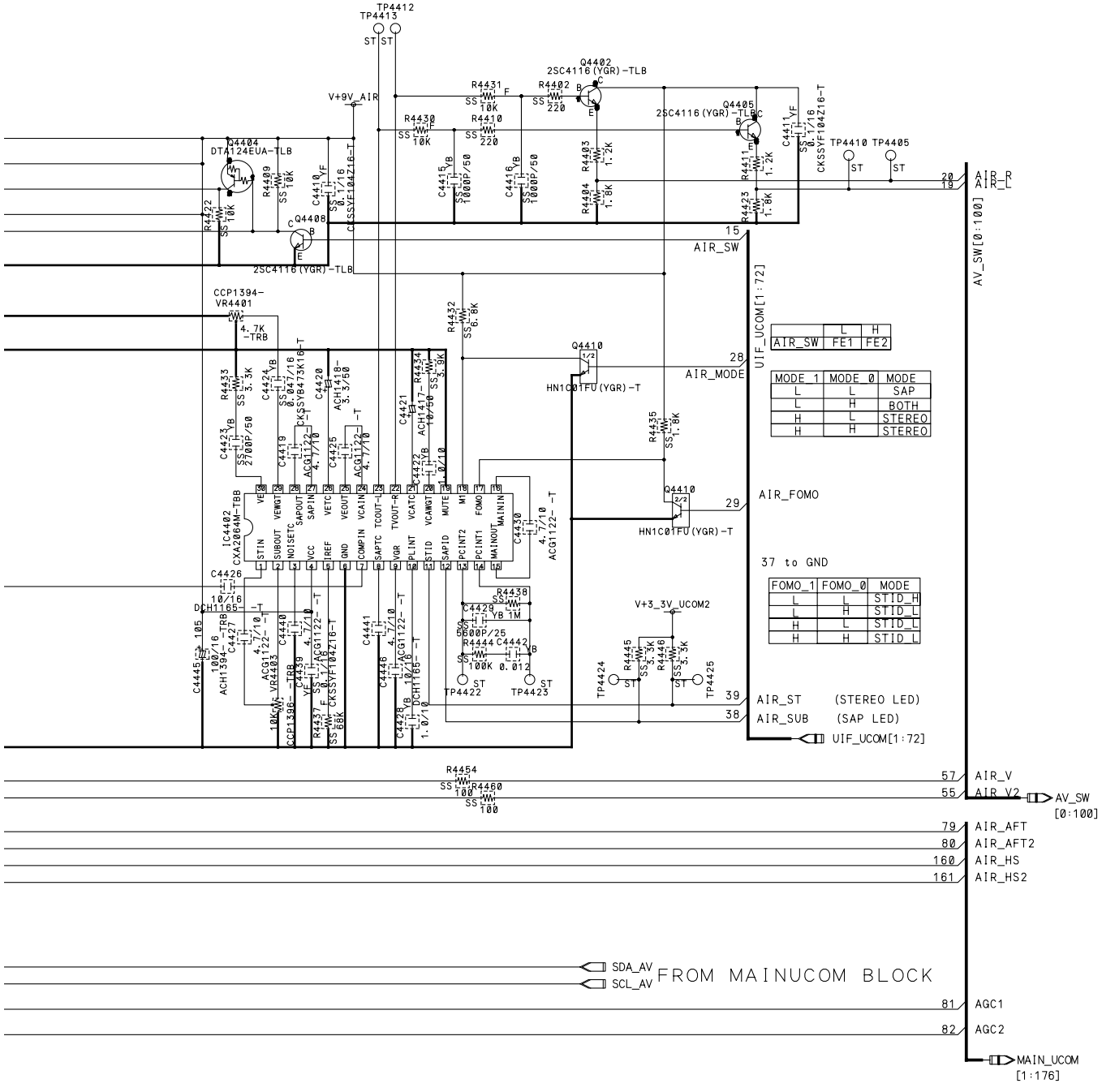
ITEM	USED	AWV2223- /J VACANT	AWV2225- /J VACANT
C	4202-4273	4203, 4205, 4233-4237, 4239, 4241, 4249, 4265,	4202, 4203, 4205, 4207, 4218, 4233-4237, 4239, 4241, 4249, 4265, 4267-4268,
D	4202-4211	4207-4208,	4207-4208,
F	4201-4207	4206,	4204, 4206,
IC	4202-4212	4208,	4208,
L	4201-4206	4204-4205,	4202, 4204-4206,
Q	4201-4203		4203,
R	4201-4228	4207-4208,	4202, 4207-4208
U	4201-4201		



3.18 MR MAIN ASSY (3/16)



ITEM	USED	AWV2223- /J VACANT	AWV2225- /J VACANT
C	4401-4452		
D	4401-4402		
F	4401-4404		
IC	4401-4402		
K	4401-4402		
L	4401-4404		
Q	4401-4418		
R	4401-4481		
U	4401-4402		
VR	4401-4404		


TP4412
TP4413
Q4402
2SC4116(YGR)-TLB
V+9V_AIR
Q4404
DTA124EUA-TLB
Q4405
2SC4116(YGR)-TLB
TP4410 TP4405
20 AIR_R
19 AIR_L
Q4408
2SC4116(YGR)-TLB
15 AIR_SW
CCP1394-
VR4401
4.7K
-TRB
Q4410
HN1C01FU(YGR)-T
28 AIR_MODE
29 AIR_FOMO
IC4402
CXA2064M-TBB
37 to GND
39 AIR_ST (STEREO LED)
38 AIR_SUB (SAP LED)
UIF_UCOM[1:72]
AV_SW[0:100]
AIR_SW
L H
AIR_SW FE1 FE2
MODE_1 MODE_0 MODE
L L SAP
L H BOTH
H L STEREO
H H STEREO
FOMO_1 FOMO_0 MODE
L L STID_H
L H STID_L
H L STID_L
H H STID_L
V+3_3V_UCOM2
TP4422
TP4423
TP4424
TP4425
57 AIR_V
55 AIR_V2
AV_SW
[0:100]
79 AIR_AFT
80 AIR_AFT2
160 AIR_HS
161 AIR_HS2
SDA_AV
SCL_AV
FROM MAINUCOM BLOCK
81 AGC1
82 AGC2
MAIN_UCOM
[1:176]

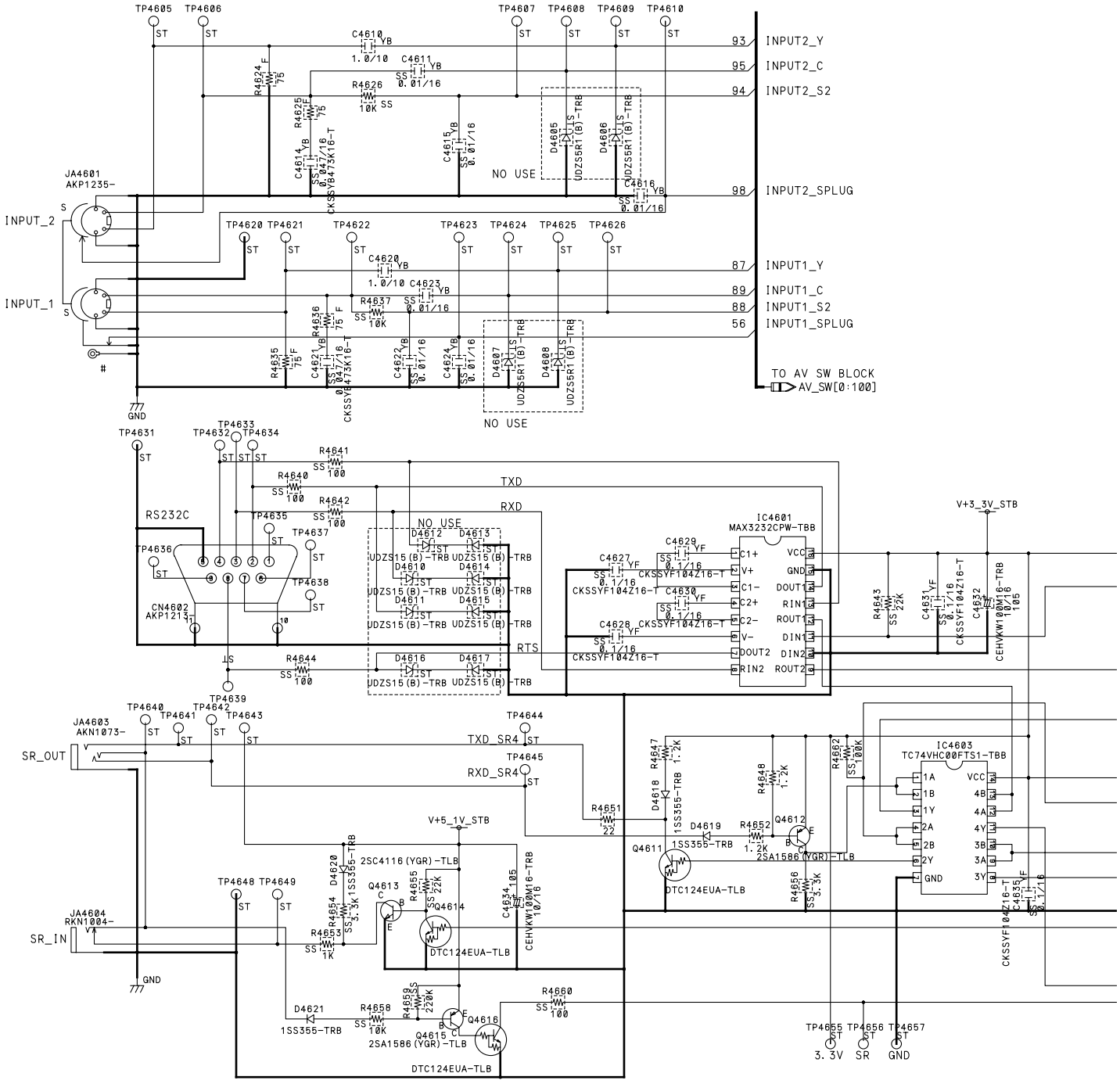
3.19 MR MAIN ASSY (4/16)

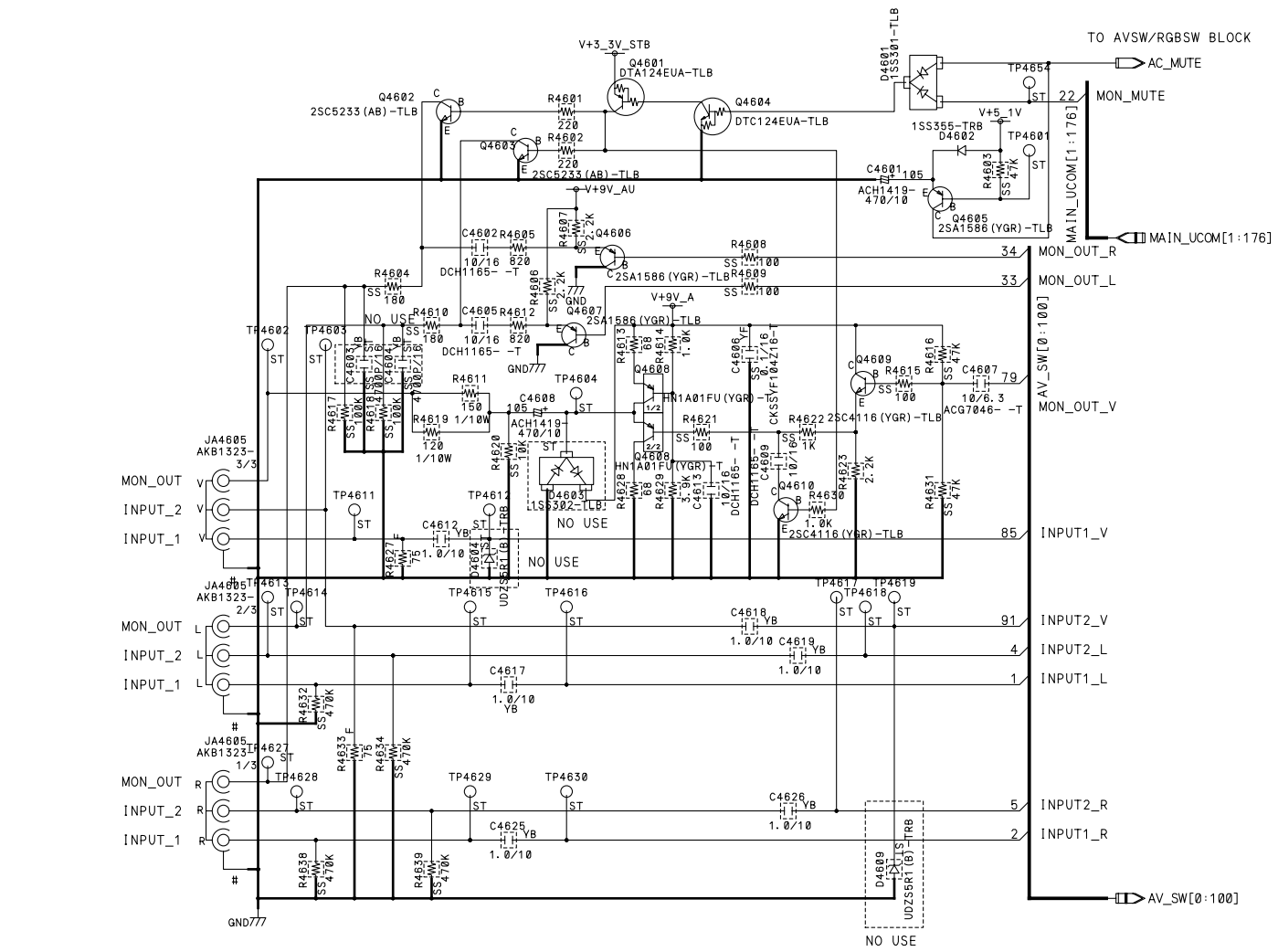
MR MAIN ASSY (4/16)

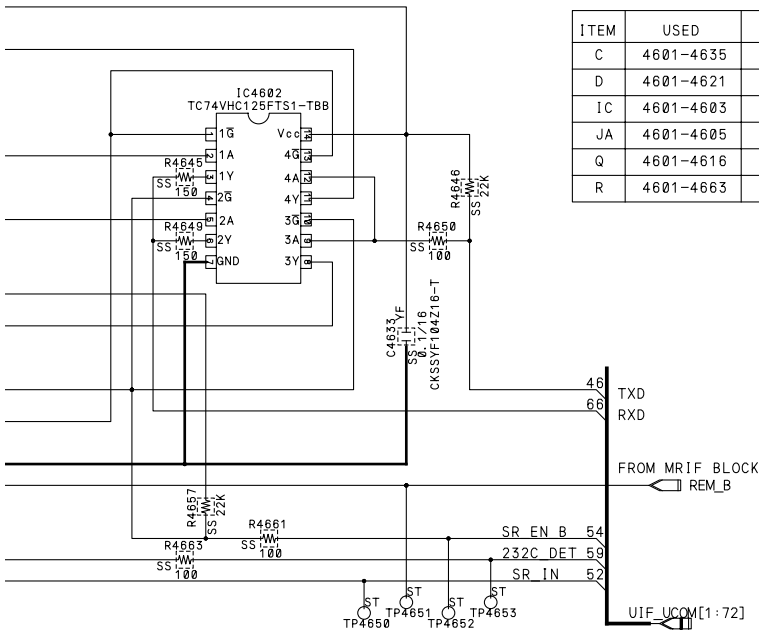
• AV IO BLOCK

NO_USE
[ ] : STANDBY

	AWV2223- /J	AWV2225- /J
JA4601	AKP1235-	AKP1234-
JA4605	AKB1323-	AKB1319-







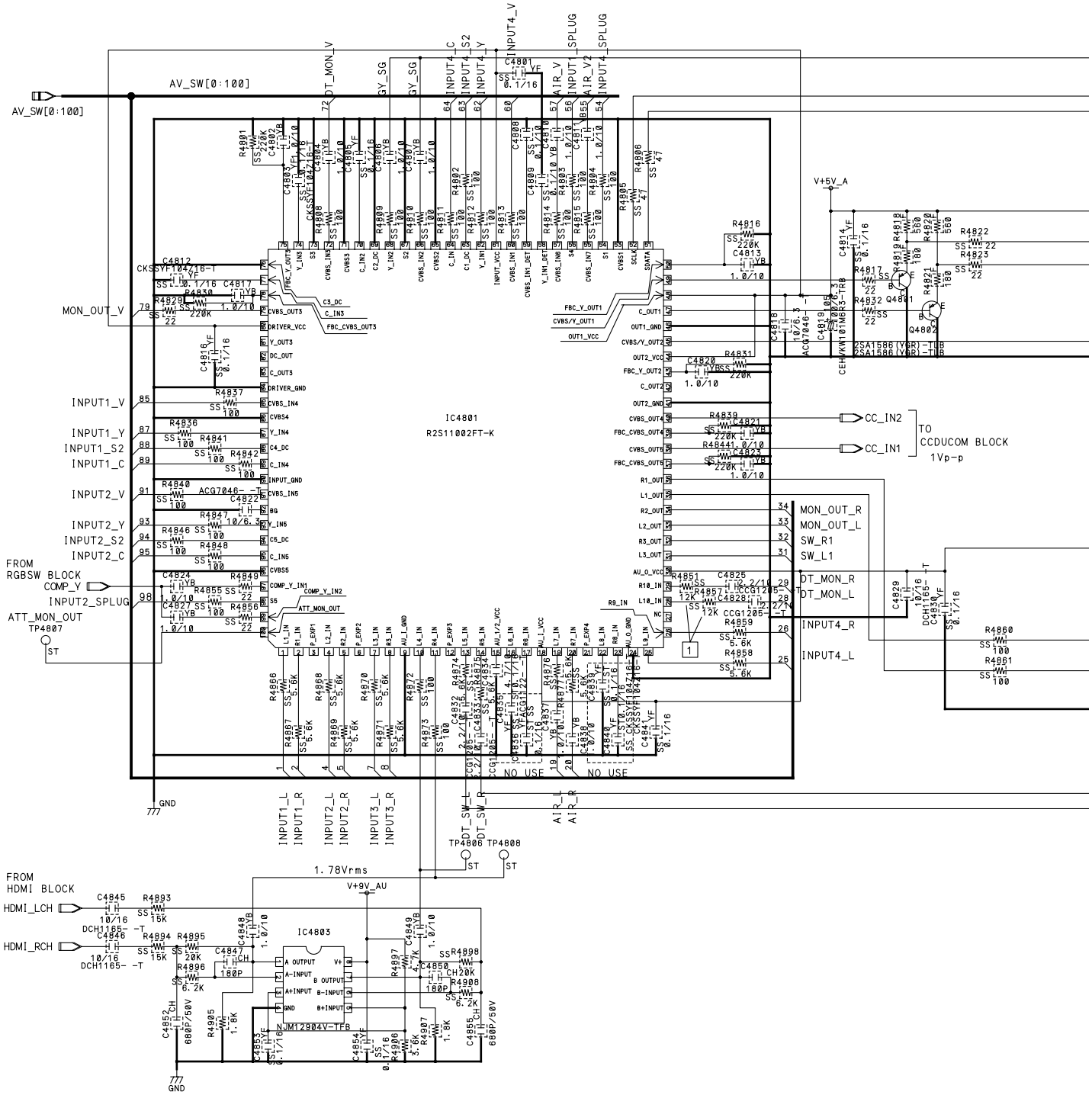
ITEM	USED	AWV2223- /J VACANT	AWV2225- /J VACANT
C	4601-4635		
D	4601-4621		
IC	4601-4603		
JA	4601-4605		
Q	4601-4616		
R	4601-4663		

3.20 MR MAIN ASSY (5/16)

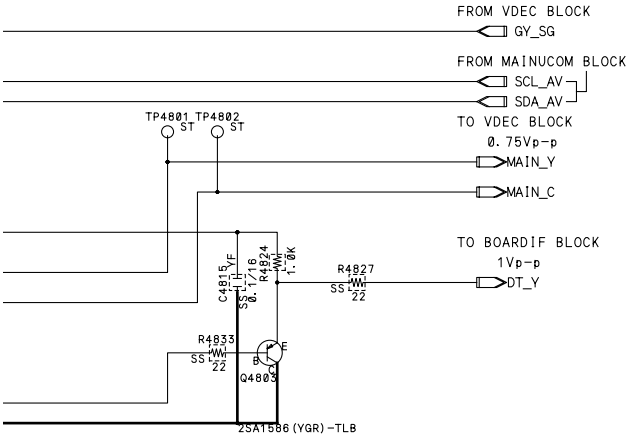
MR MAIN ASSY (5/16)

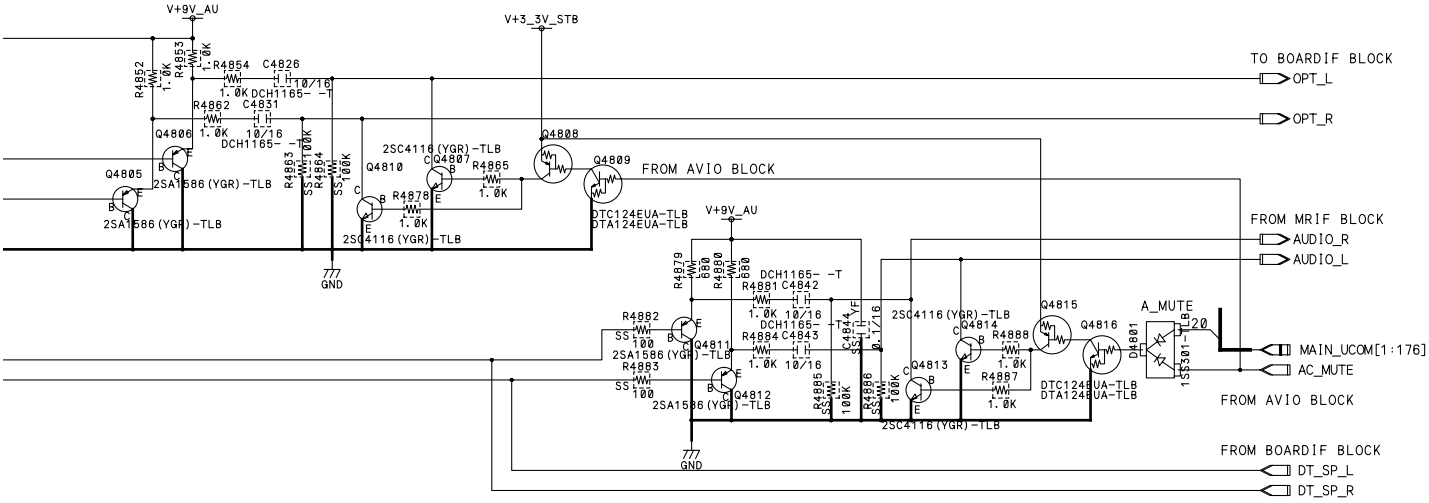
• AV SW BLOCK

NO_USE
: STANDBY



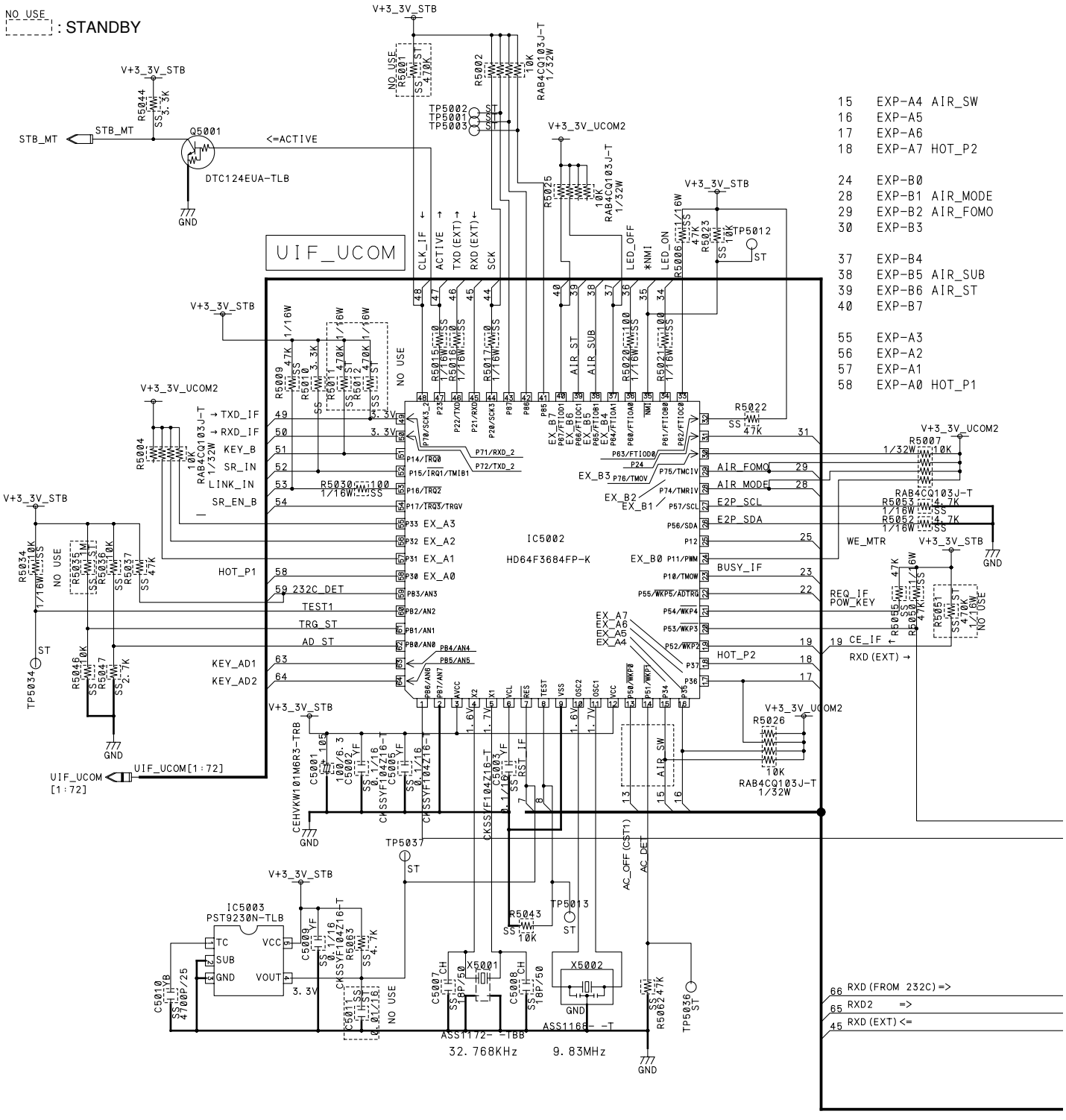
ITEM	USED	AWV2223- /J VACANT	AWV2225- /J VACANT
C	4801-4855	4851,	4851,
D	4801-4801		
IC	4801-4803	4802,	4802,
Q	4801-4816	4804,	4804,
R	4801-4908	4807, 4825-4826, 4828, 4834-4835, 4838, 4843, 4845, 4850, 4889-4892, 4899-4904,	4807, 4825-4826, 4828, 4834-4835, 4838, 4843, 4845, 4850, 4889-4892, 4899-4904,



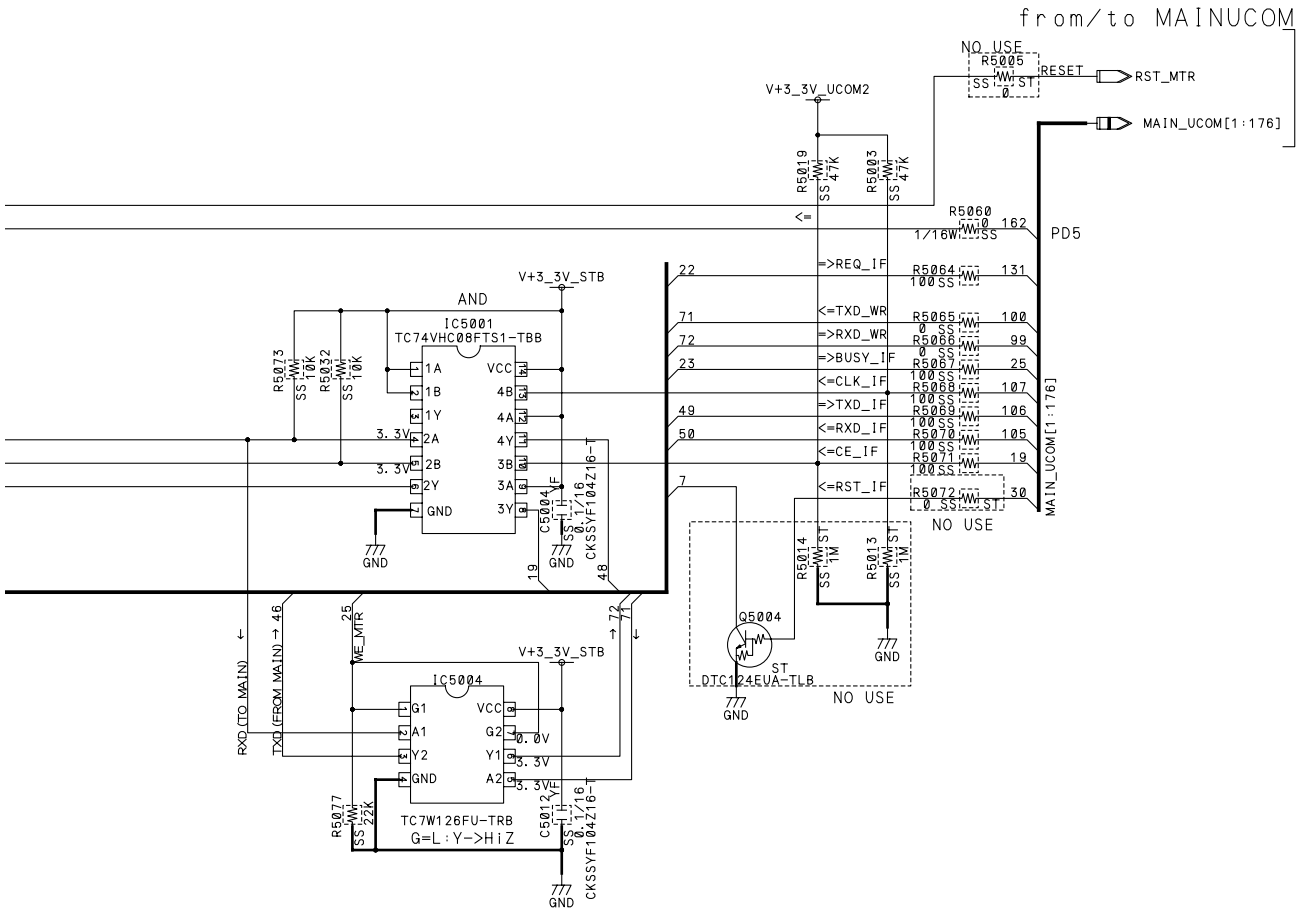


MR MAIN ASSY (6/16)

• IF UCOM BLOCK

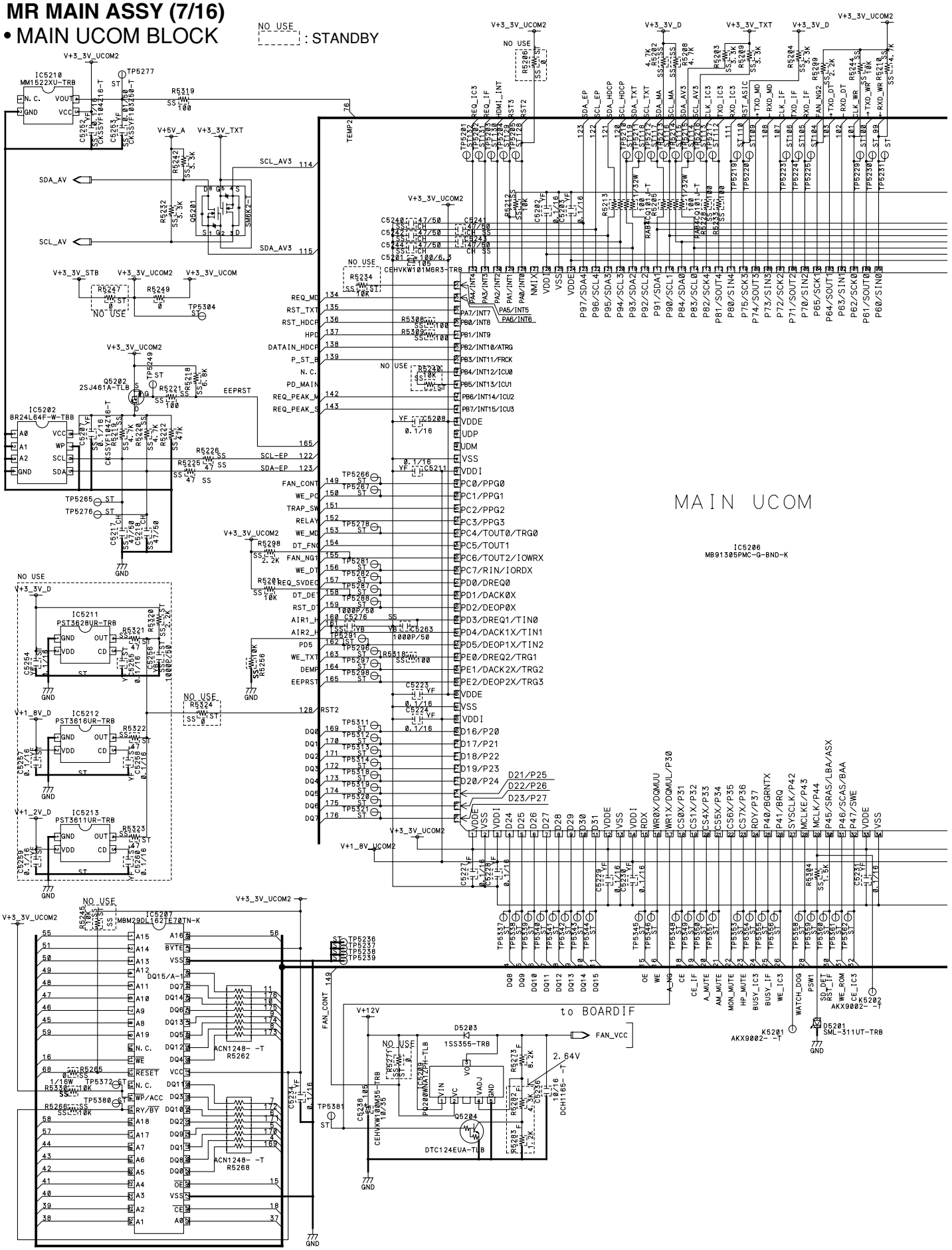


ITEM	USED	AWV2223- /J VACANT	AWV2225- /J VACANT
C	5001-5012	5006,	5006,
IC	5001-5004		
Q	5001-5004	5002-5003,	5002-5003,
R	5001-5077	5008, 5018, 5024, 5027-5029, 5031, 5033, 5038-5042, 5045, 5048-5049, 5054, 5056-5059, 5061, 5074-5076,	5008, 5018, 5024, 5027-5029, 5031, 5033, 5038-5042, 5045, 5048-5049, 5054, 5056-5059, 5061, 5074-5076,
X	5001-5002		

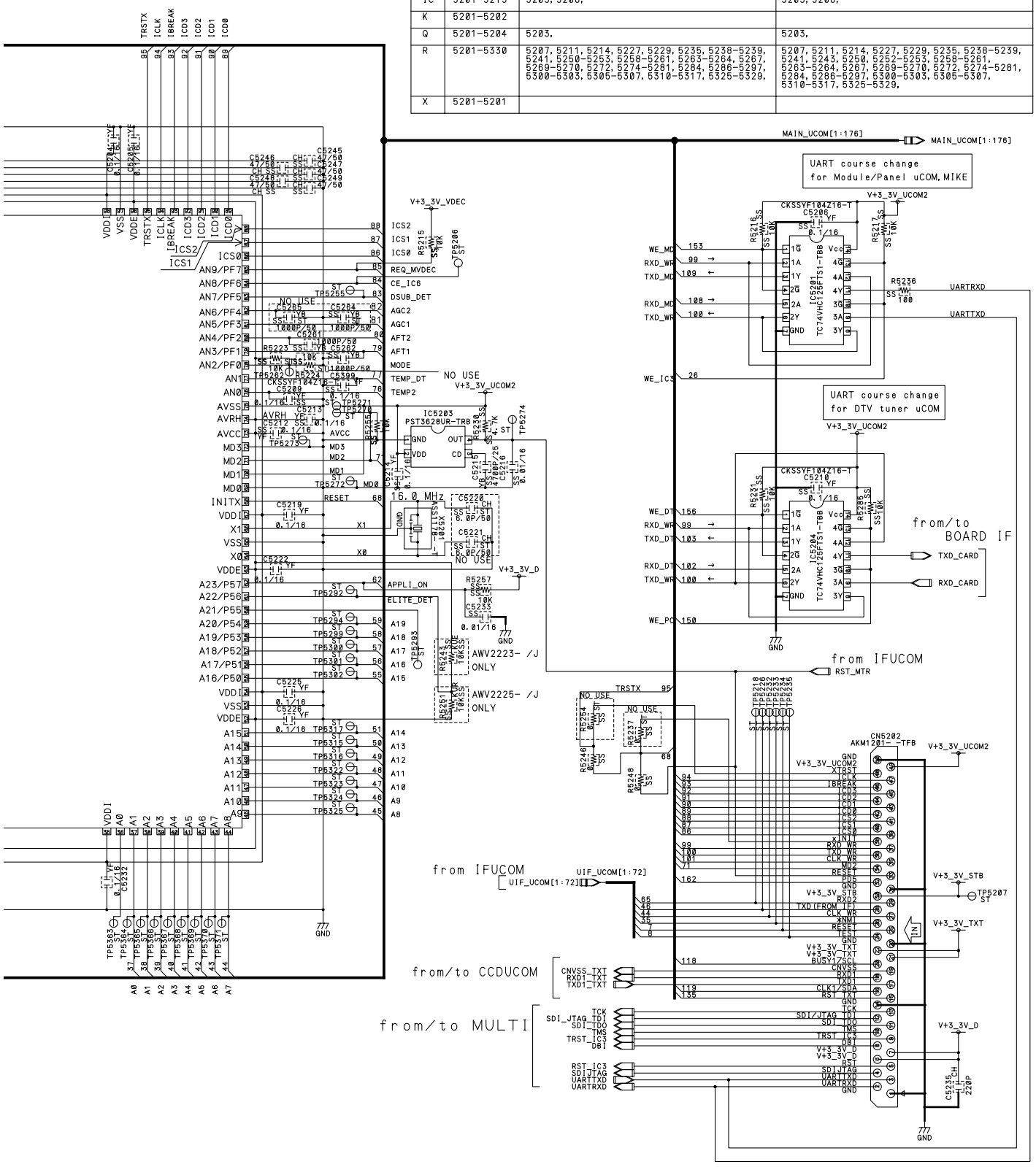


MR MAIN ASSY (7/16)

• MAIN UCOM BLOCK



ITEM	USED	AWV2223- /J VACANT	AWV2225- /J VACANT
C	5201-5399	5237, 5239, 5250-5251, 5266-5275, 5277-5398,	5237, 5239, 5250-5251, 5266-5275, 5277-5398,
CN	5202-5202		
D	5201-5203	5202,	5202,
IC	5201-5213	5205, 5208,	5205, 5208,
K	5201-5202		
Q	5201-5204	5203,	5203,
R	5201-5330	5207, 5211, 5214, 5227, 5229, 5235, 5238-5239, 5241, 5250-5253, 5258-5261, 5263-5264, 5267, 5269-5270, 5272, 5274-5281, 5284, 5286-5297, 5300-5303, 5305-5307, 5310-5317, 5325-5329,	5207, 5211, 5214, 5227, 5229, 5235, 5238-5239, 5241, 5243, 5250, 5252-5253, 5258-5261, 5263-5264, 5267, 5269-5270, 5272, 5274-5281, 5284, 5286-5297, 5300-5303, 5305-5307, 5310-5317, 5325-5329,
X	5201-5201		

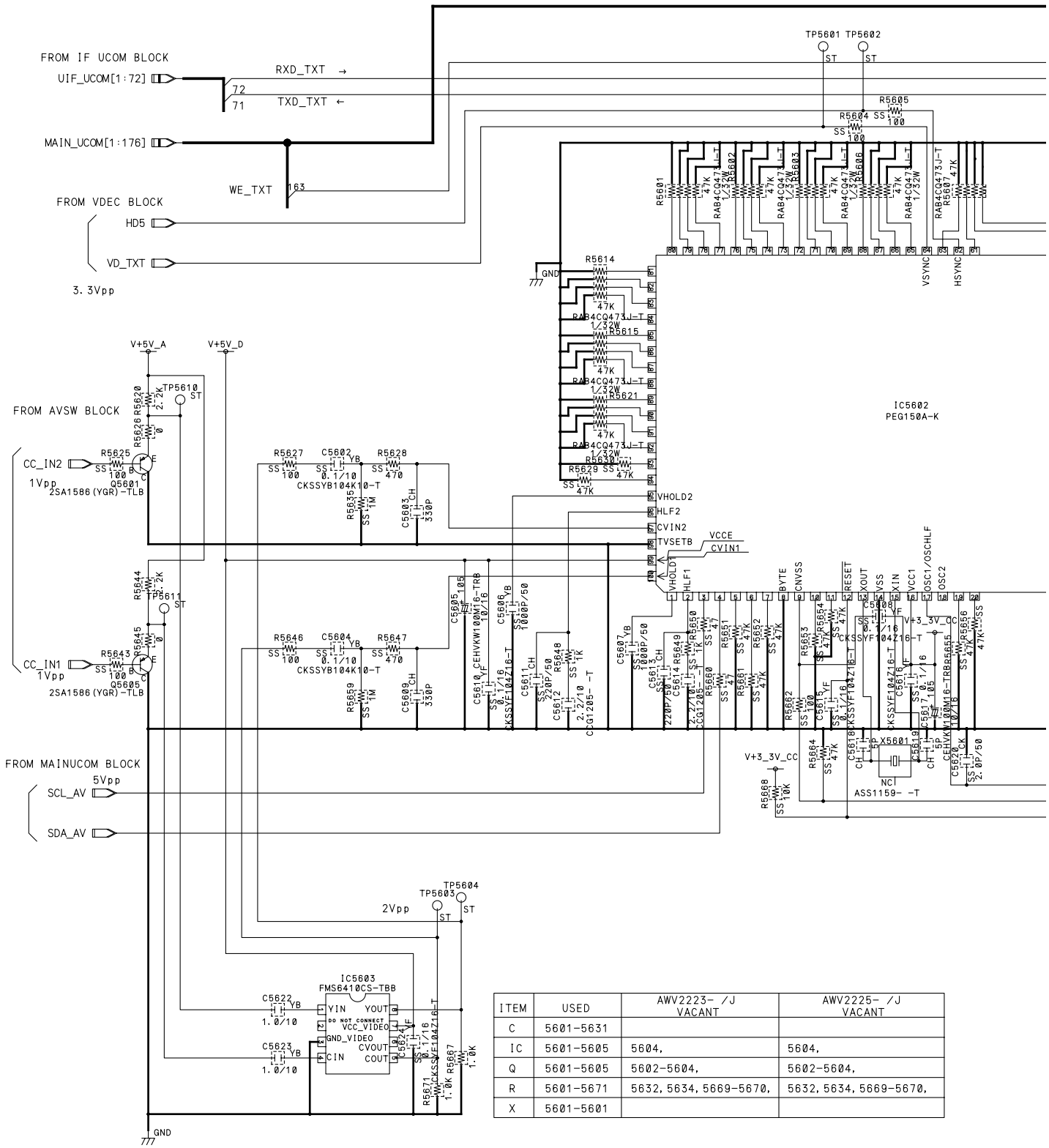


3.23 MR MAIN ASSY (8/16)

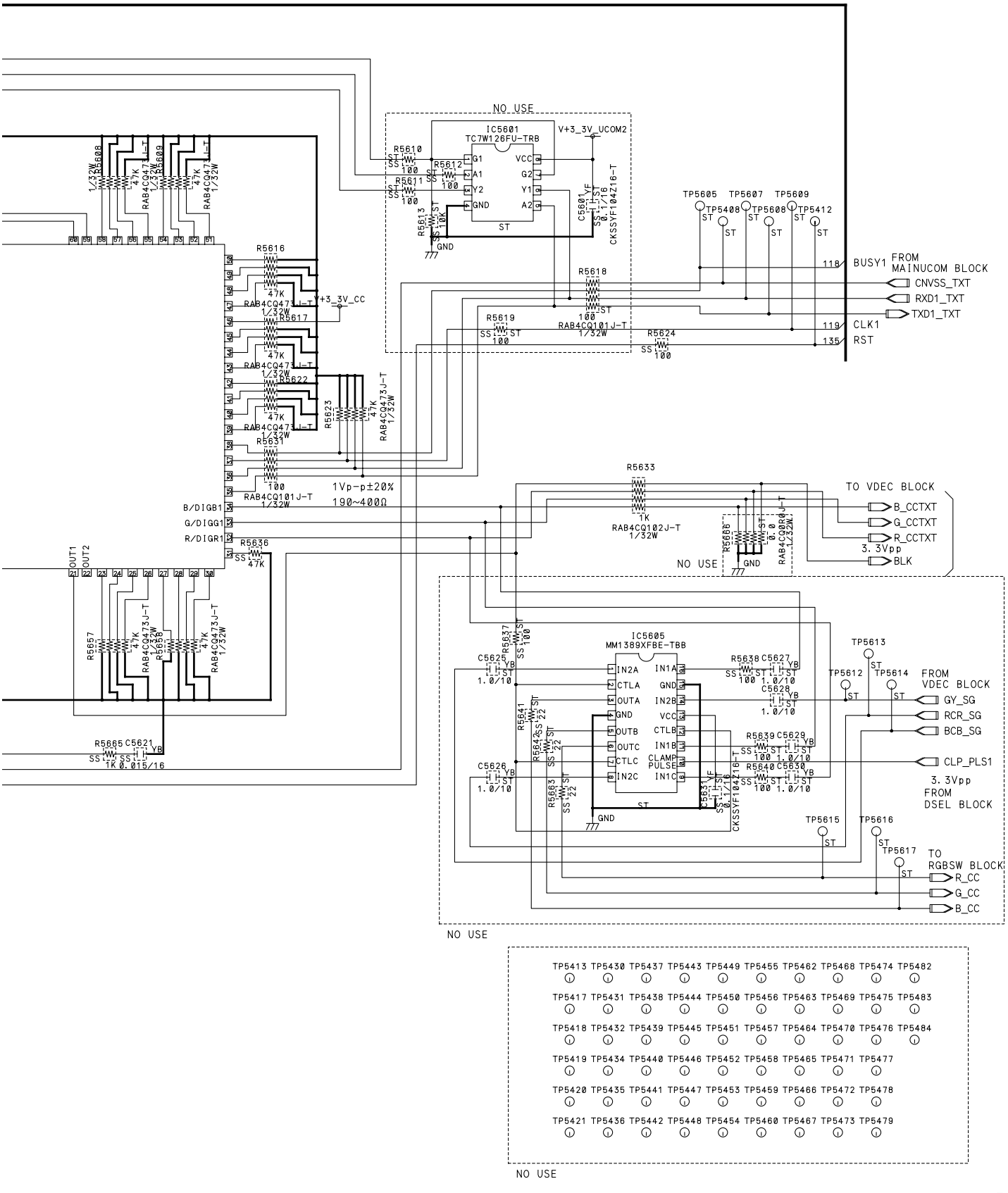
MR MAIN ASSY (8/16)

• CCD UCOM BLOCK

NO_USE : STANDBY



ITEM	USED	AWV2223- /J VACANT	AWV2225- /J VACANT
C	5601-5631		
IC	5601-5605	5604,	5604,
Q	5601-5605	5602-5604,	5602-5604,
R	5601-5671	5632, 5634, 5669-5670,	5632, 5634, 5669-5670,
X	5601-5601		

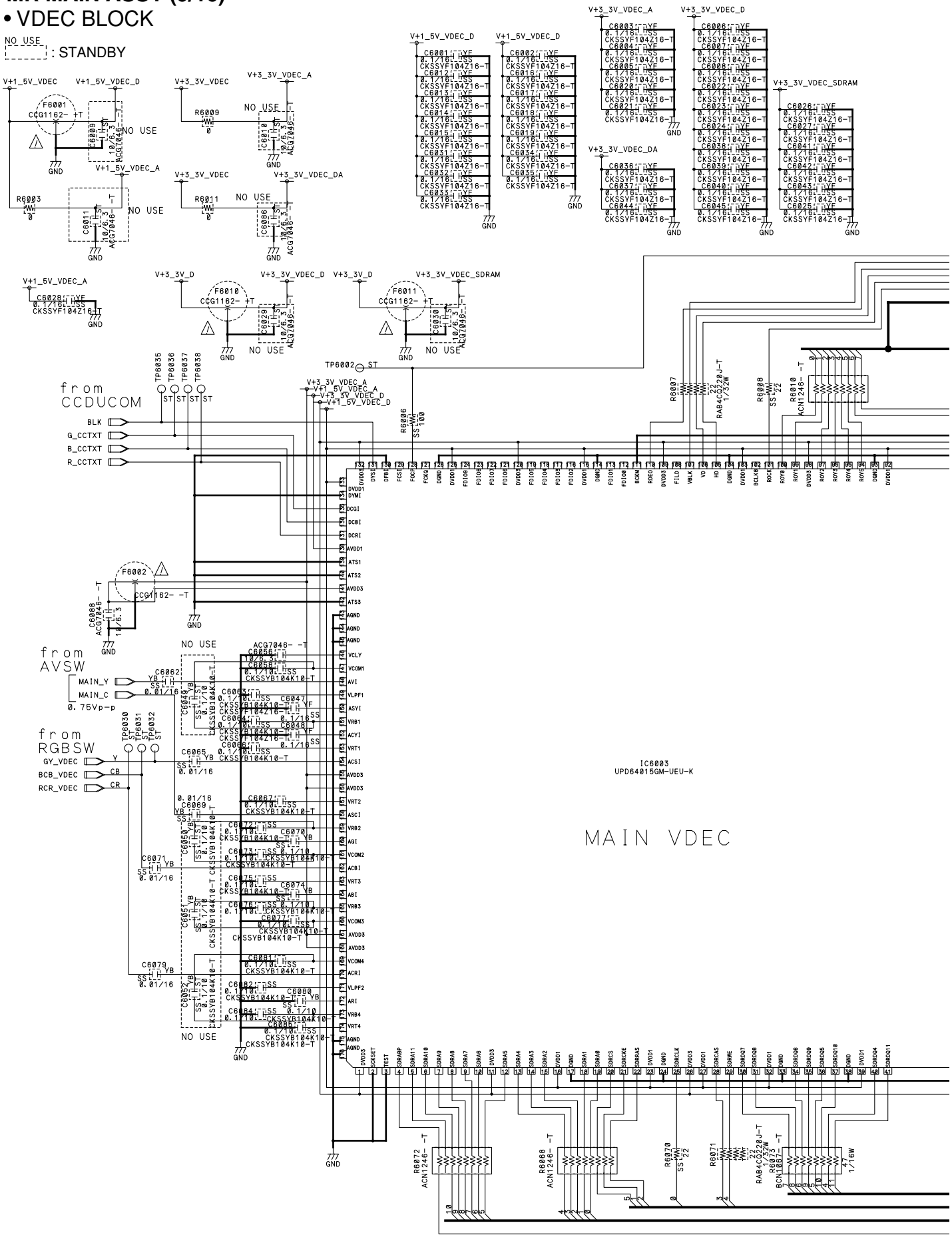

NO USE
IC5601
TC7W126FU-TRB
V+3_3V_UCOM2
R5610
R5612
R5611
R5613
C5601
CKSSYF104Z16-T
TP5605
TP5607
TP5609
TP5408
TP5608
TP5412
118
BUSY1
FROM
MAINUCOM BLOCK
CNVSS_TXT
RXD1_TXT
TXD1_TXT
119
CLK1
135
RST
R5618
R5619
R5624
RAB4CQ101J-T
1/32W
R5616
R5617
R5622
R5623
R5631
R5633
V+3_3V_CC
1Vp-p±20%
190~400Ω
B/DIGB1
G/DIGG1
R/DIGR1
TO VDEC BLOCK
B_CCTXT
G_CCTXT
R_CCTXT
3.3Vpp
BLK
R5636
OUT1
OUT2
R5657
R5658
R5665
C5621
IC5605
MM1389XFBE-TBB
IN2A
CTLA
OUTA
GND
OUTB
OUTC
CTLC
IN2C
IN1A
GND
IN2B
VCC
CTLB
IN1B
CLAMP
PULSE
IN1C
C5625
C5626
C5627
C5628
C5629
C5630
C5631
R5637
R5638
R5639
R5640
R5641
R5642
R5643
R5663
TP5613
TP5612
TP5614
FROM
VDEC BLOCK
GY_SG
RCR_SG
BCB_SG
CLP_PLS1
3.3Vpp
FROM
DSEL BLOCK
TP5615
TP5616
TP5617
TO
RGBSW BLOCK
R_CC
G_CC
B_CC
NO USE
TP5413 TP5430 TP5437 TP5443 TP5449 TP5455 TP5462 TP5468 TP5474 TP5482
TP5417 TP5431 TP5438 TP5444 TP5450 TP5456 TP5463 TP5469 TP5475 TP5483
TP5418 TP5432 TP5439 TP5445 TP5451 TP5457 TP5464 TP5470 TP5476 TP5484
TP5419 TP5434 TP5440 TP5446 TP5452 TP5458 TP5465 TP5471 TP5477
TP5420 TP5435 TP5441 TP5447 TP5453 TP5459 TP5466 TP5472 TP5478
TP5421 TP5436 TP5442 TP5448 TP5454 TP5460 TP5467 TP5473 TP5479
NO USE

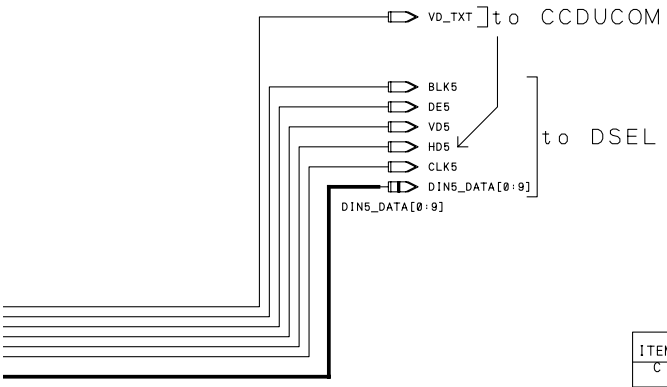
3.24 MR MAIN ASSY (9/16)

MR MAIN ASSY (9/16)

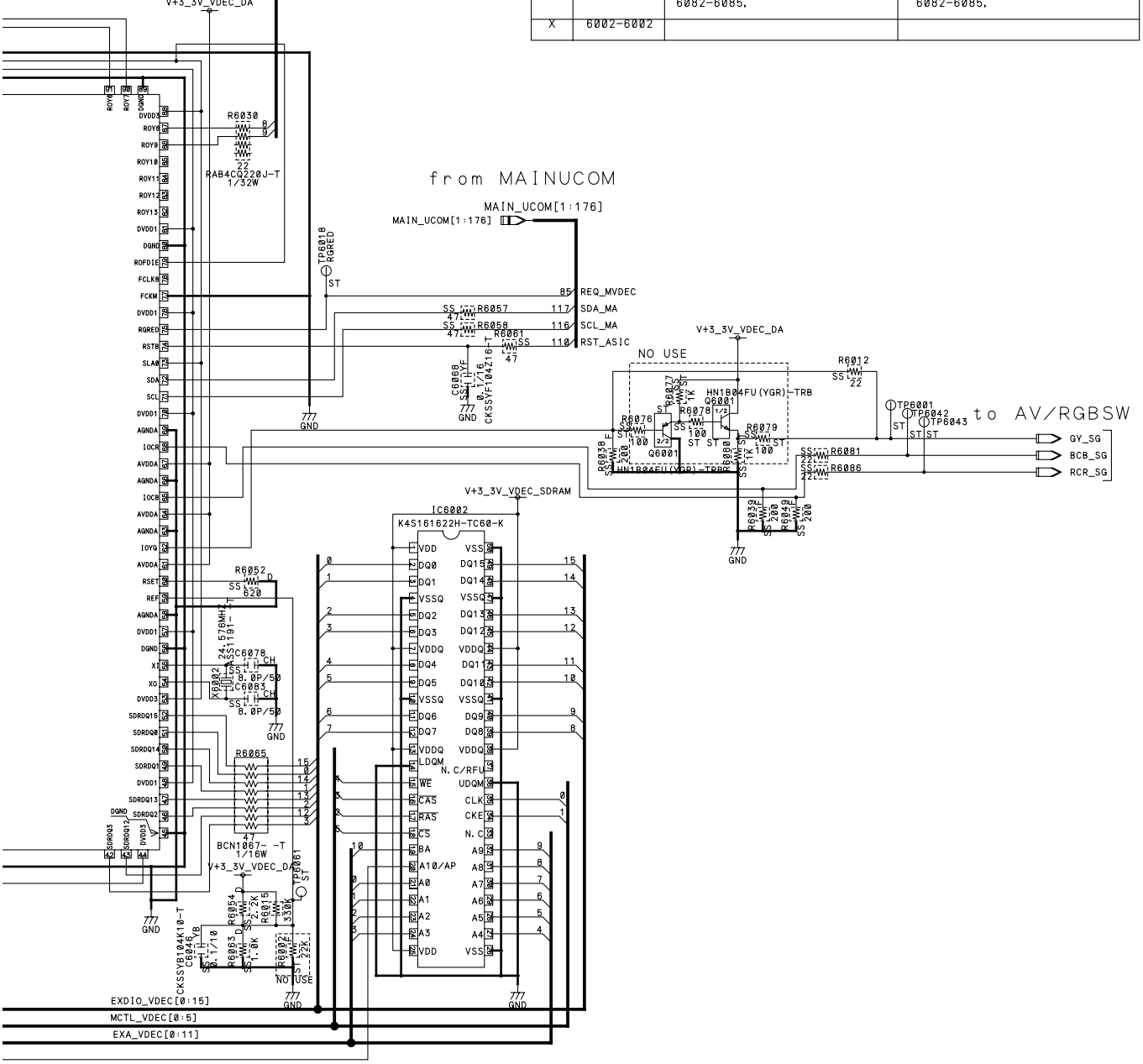
• VDEC BLOCK

NO USE
[ ] : STANDBY





ITEM	USED	AWV2223- /J VACANT	AWV2225- /J VACANT
C	6001-6088	6053-6055, 6057, 6059-6061, 6087,	6053-6055, 6057, 6059-6061, 6087,
F	6001-6011	6003-6009,	6003-6009,
IC	6002-6003		
Q	6001-6001		
R	6002-6086	6004-6005, 6013-6014, 6016-6029, 6031-6037, 6040-6048, 6050-6051, 6053, 6055-6056, 6059-6060, 6062, 6064, 6066-6067, 6069, 6074-6075, 6082-6085,	6004-6005, 6013-6014, 6016-6029, 6031-6037, 6040-6048, 6050-6051, 6053, 6055-6056, 6059-6060, 6062, 6064, 6066-6067, 6069, 6074-6075, 6082-6085,
X	6002-6002		

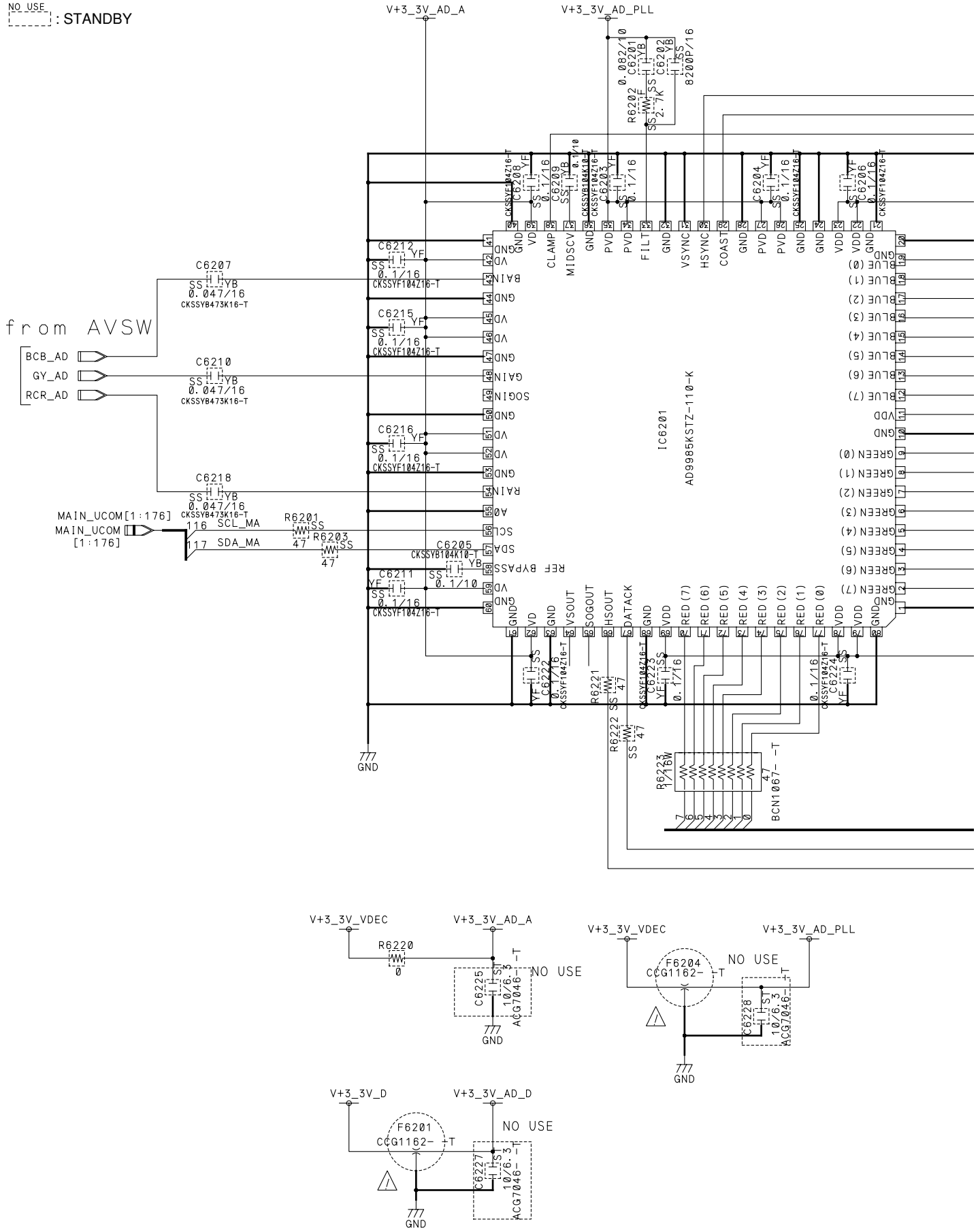


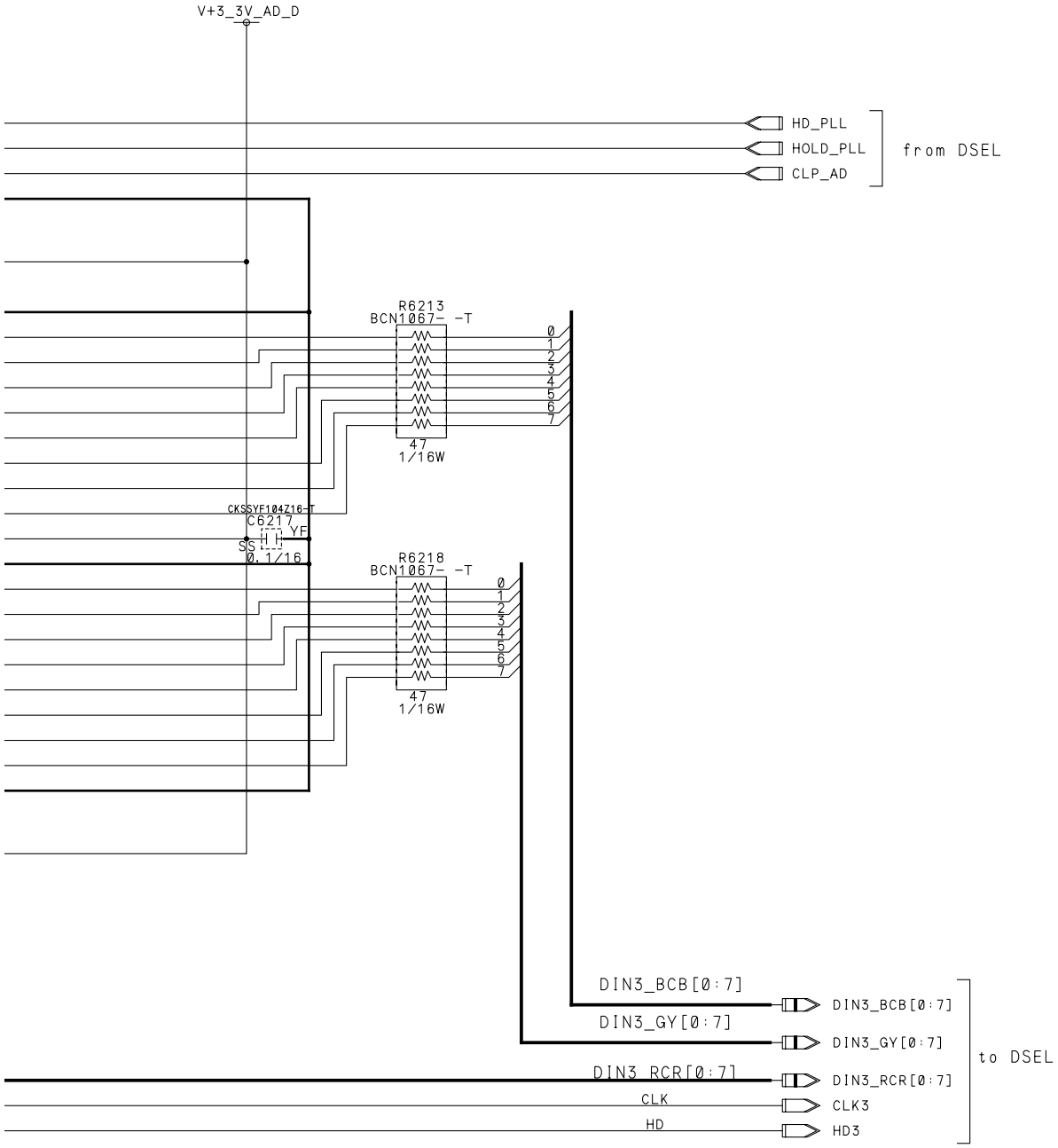
3.25 MR MAIN ASSY (10/16)

MR MAIN ASSY (10/16)

• ADC BLOCK

NO USE : STANDBY





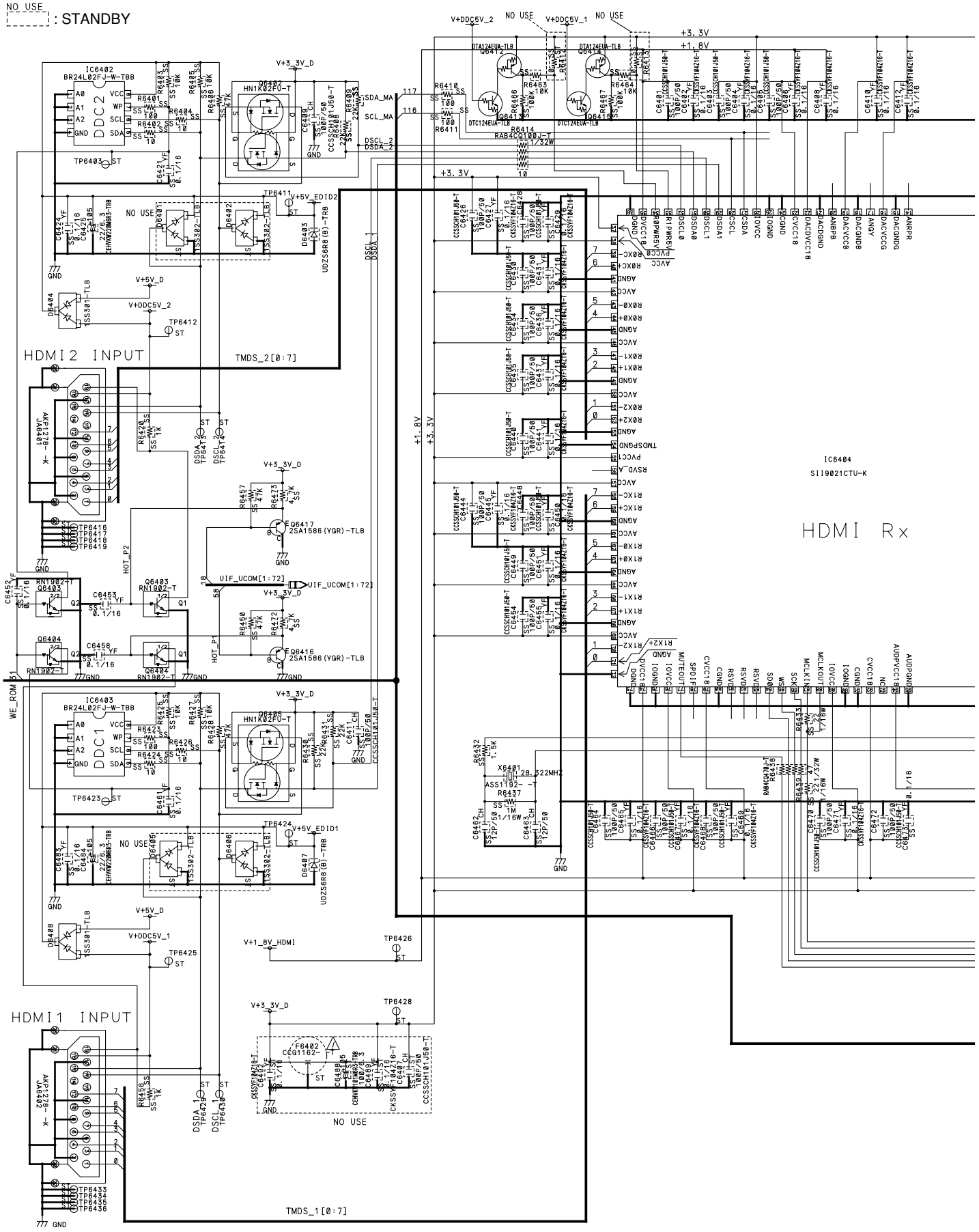
ITEM	USED	AWV2223- /J VACANT	AWV2225- /J VACANT
C	6201-6228	6213-6214, 6219-6221, 6226,	6213-6214, 6219-6221, 6226,
F	6201-6204	6202-6203,	6202-6203,
IC	6201-6201		
R	6201-6223	6204-6212, 6214-6217, 6219,	6204-6212, 6214-6217, 6219,

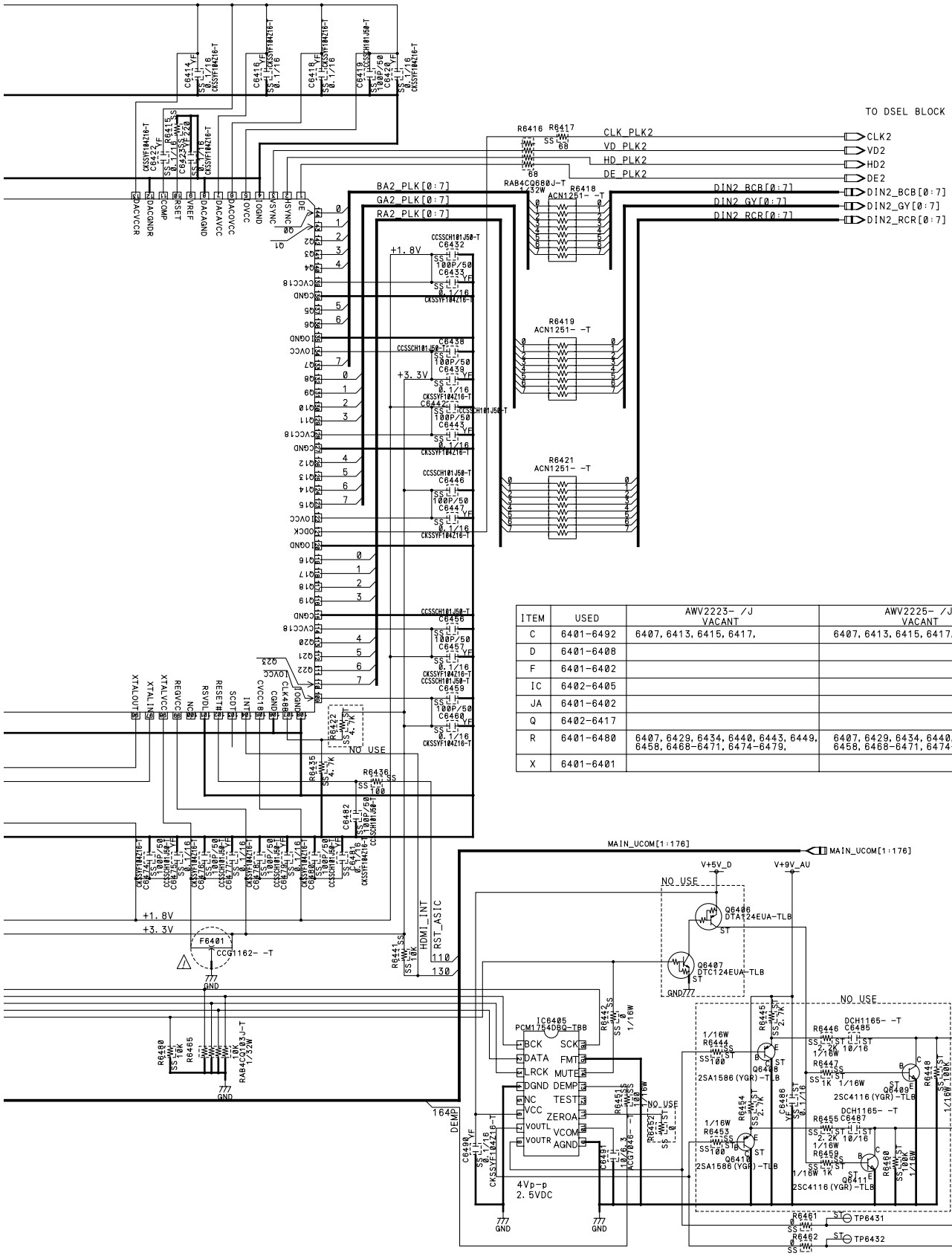
3.26 MR MAIN ASSY (11/16)

MR MAIN ASSY (11/16)

• HDMI BLOCK

NO USE
[ ] : STANDBY



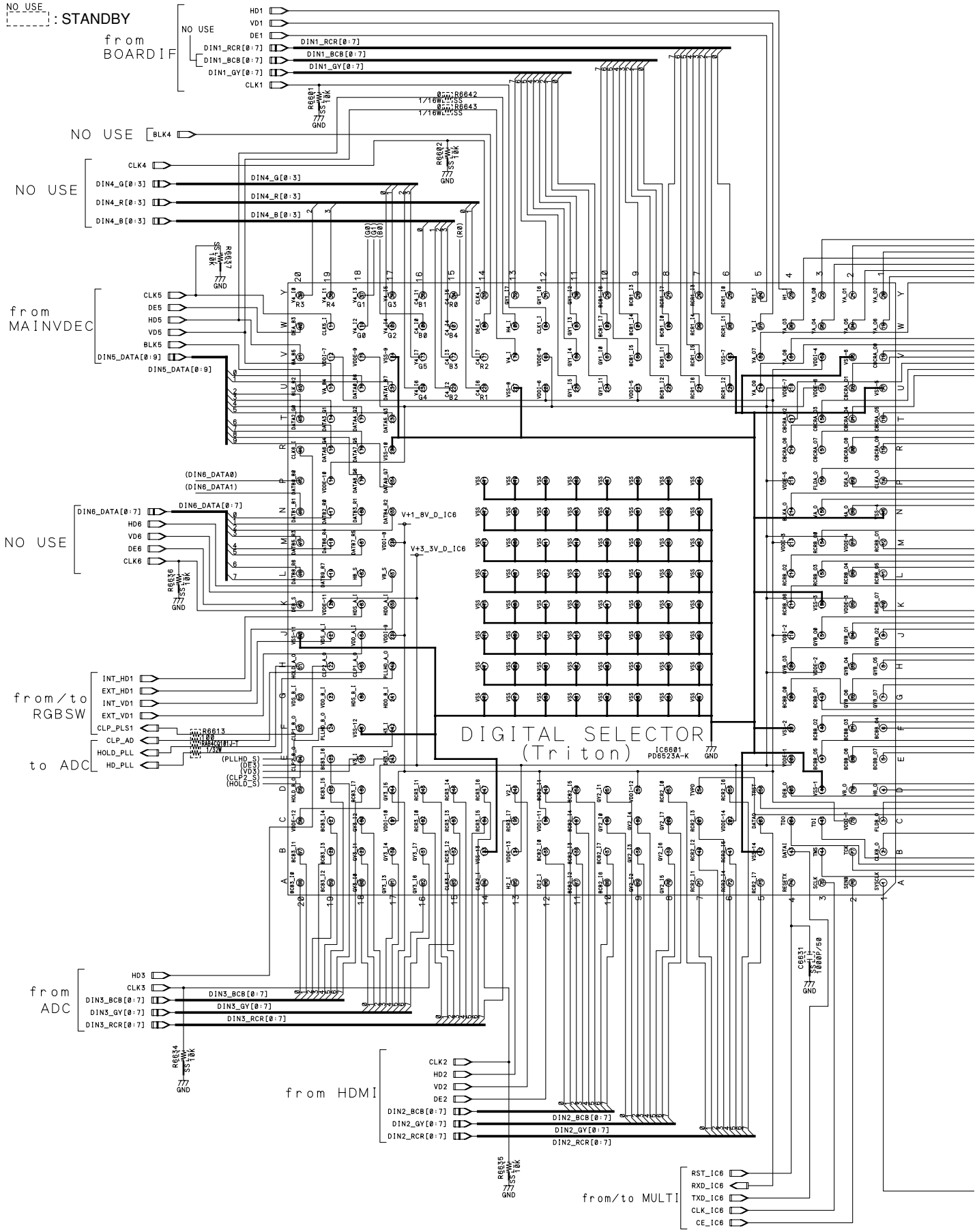


ITEM	USED	AWV2223- /J VACANT	AWV2225- /J VACANT
C	6401-6492	6407, 6413, 6415, 6417,	6407, 6413, 6415, 6417,
D	6401-6408		
F	6401-6402		
IC	6402-6405		
JA	6401-6402		
Q	6402-6417		
R	6401-6480	6407, 6429, 6434, 6440, 6443, 6449, 6458, 6468-6471, 6474-6479,	6407, 6429, 6434, 6440, 6443, 6449, 6458, 6468-6471, 6474-6479,
X	6401-6401		

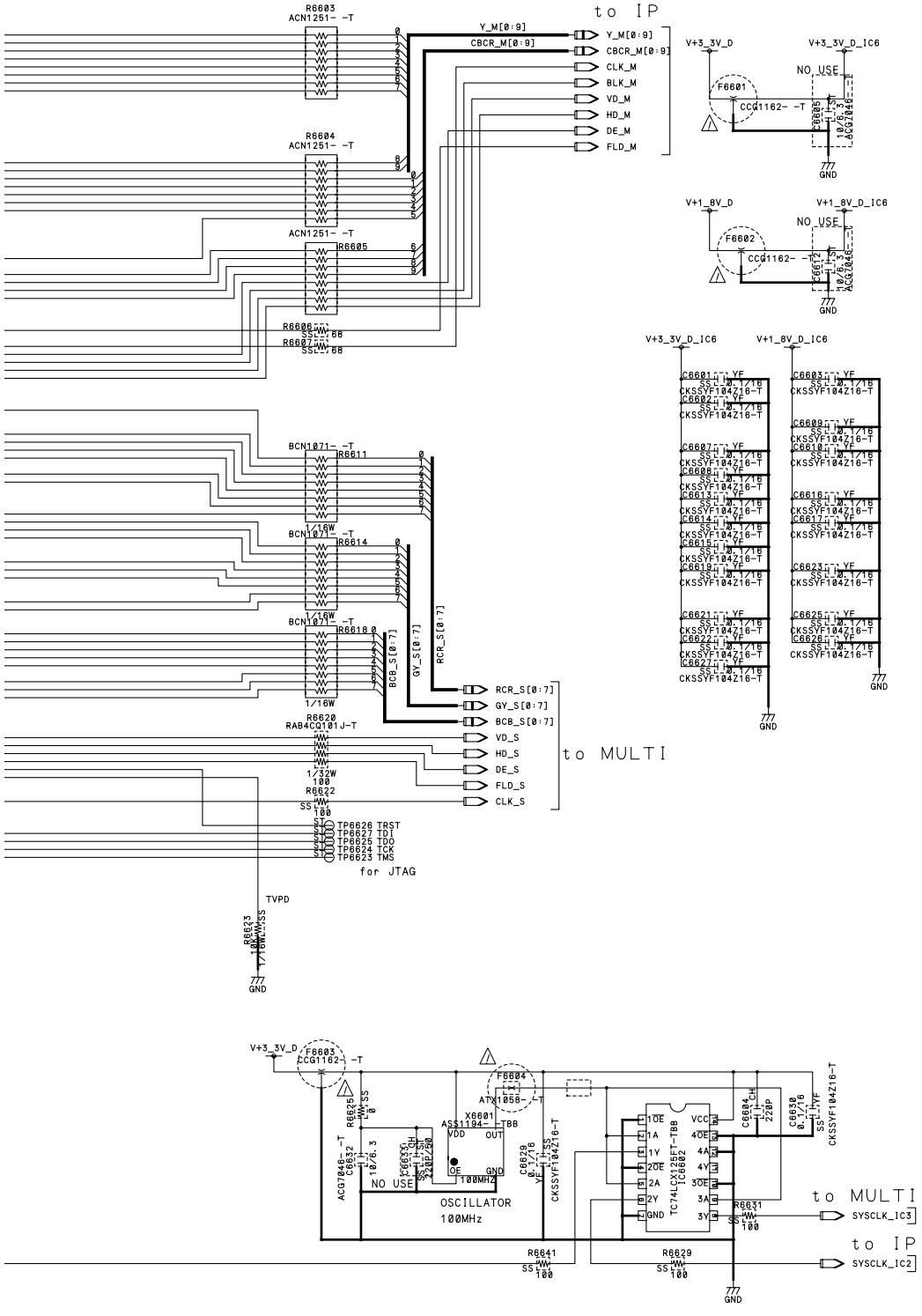
3.27 MR MAIN ASSY (12/16)

MR MAIN ASSY (12/16)

• DSEL BLOCK



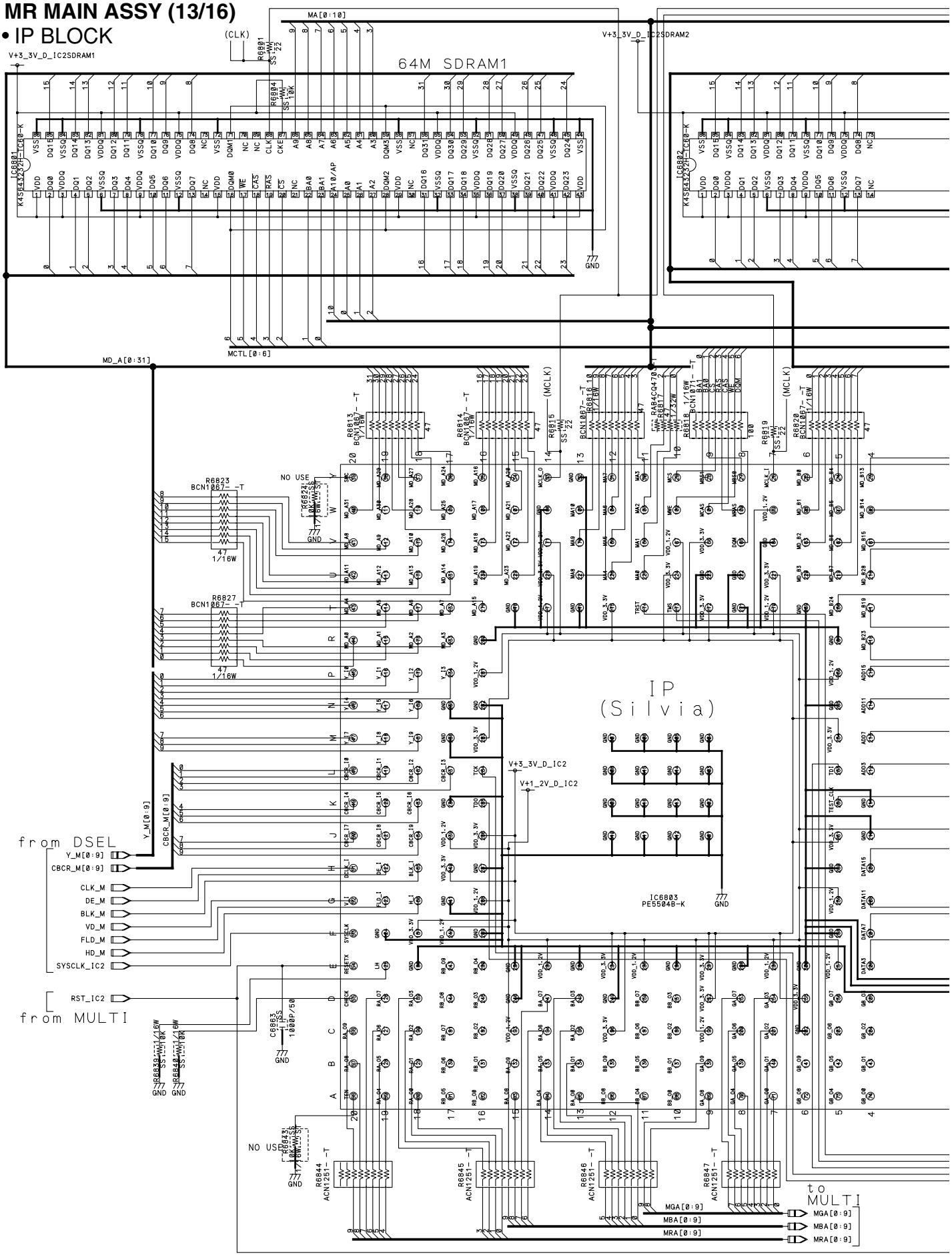
ITEM	USED	AWV2223- /J VACANT	AWV2225- /J VACANT
C	6601-6633	6606, 6611, 6618, 6620, 6624, 6628,	6606, 6611, 6618, 6620, 6624, 6628,
F	6601-6603		
IC	6601-6602		
R	6601-6643	6608-6610, 6612, 6615-6617, 6619, 6621, 6624, 6626-6627, 6630, 6632-6633, 6638-6640,	6608-6610, 6612, 6615-6617, 6619, 6621, 6624, 6626-6627, 6630, 6632-6633, 6638-6640,
X	6601-6601		



3.28 MR MAIN ASSY (13/16)

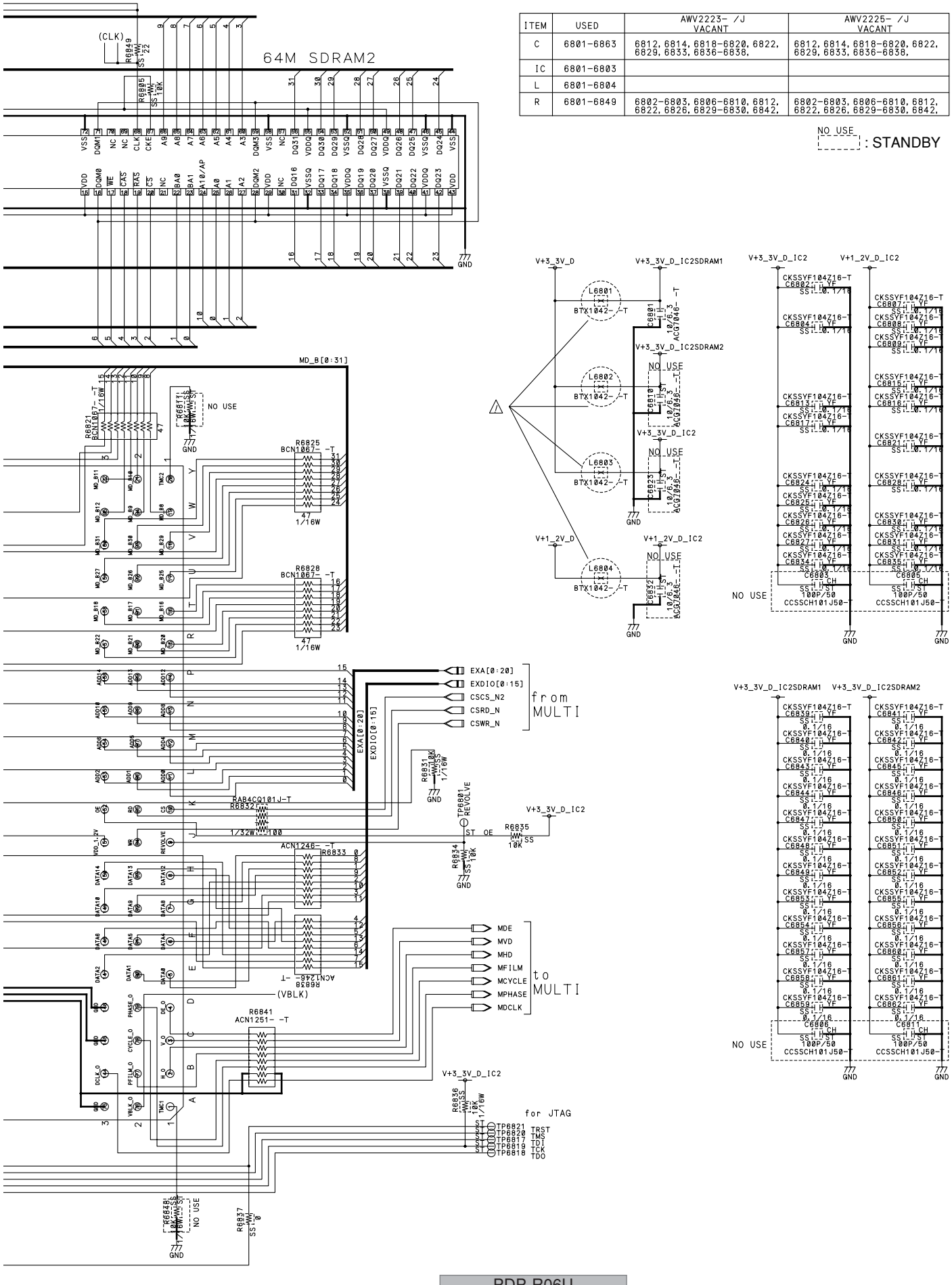
MR MAIN ASSY (13/16)

• IP BLOCK



ITEM	USED	AWV2223- /J VACANT	AWV2225- /J VACANT
C	6801-6863	6812, 6814, 6818-6820, 6822, 6829, 6833, 6836-6838,	6812, 6814, 6818-6820, 6822, 6829, 6833, 6836-6838,
IC	6801-6803		
L	6801-6804		
R	6801-6849	6802-6803, 6806-6810, 6812, 6822, 6826, 6829-6830, 6842,	6802-6803, 6806-6810, 6812, 6822, 6826, 6829-6830, 6842,

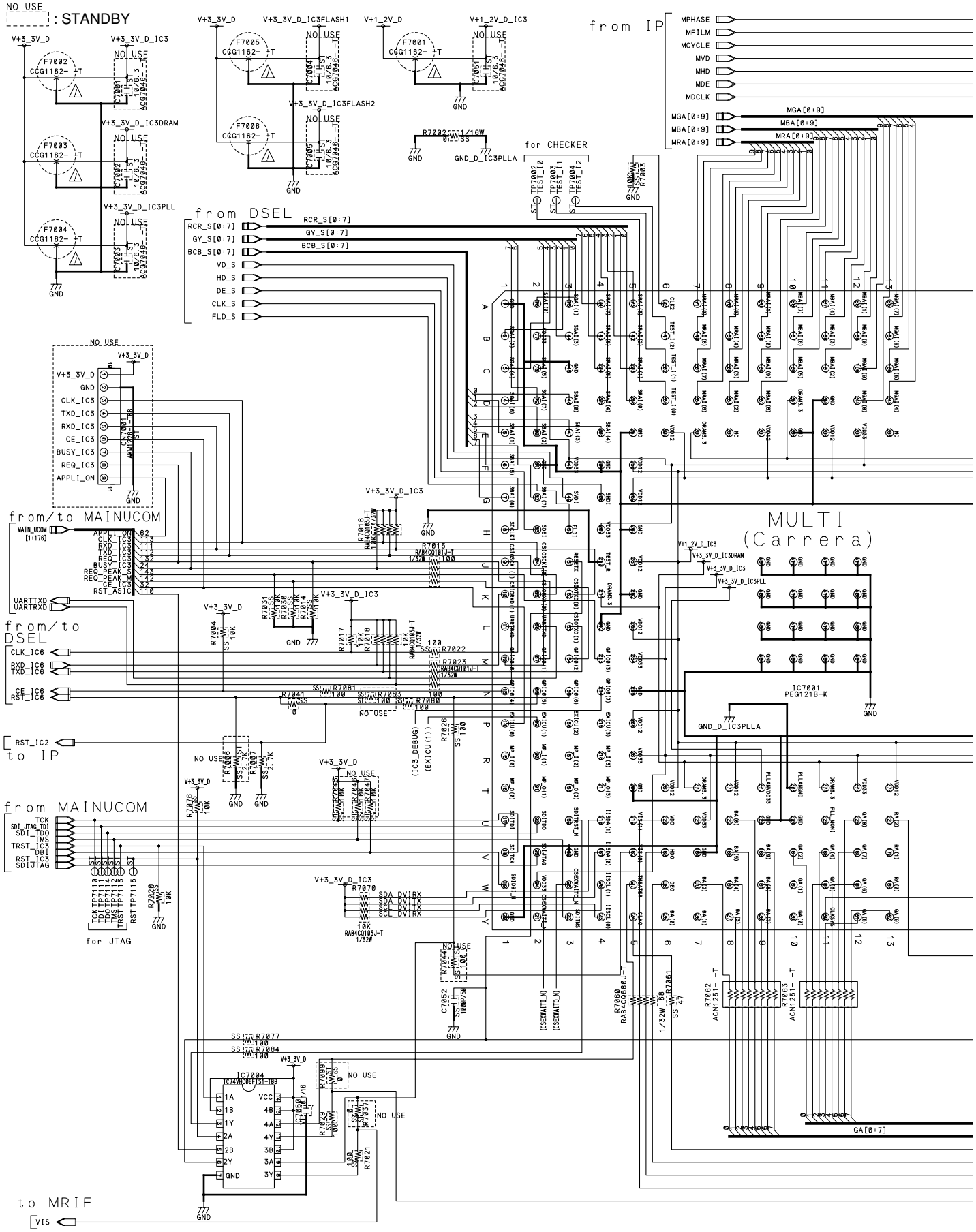
NO USE
[ ] : STANDBY

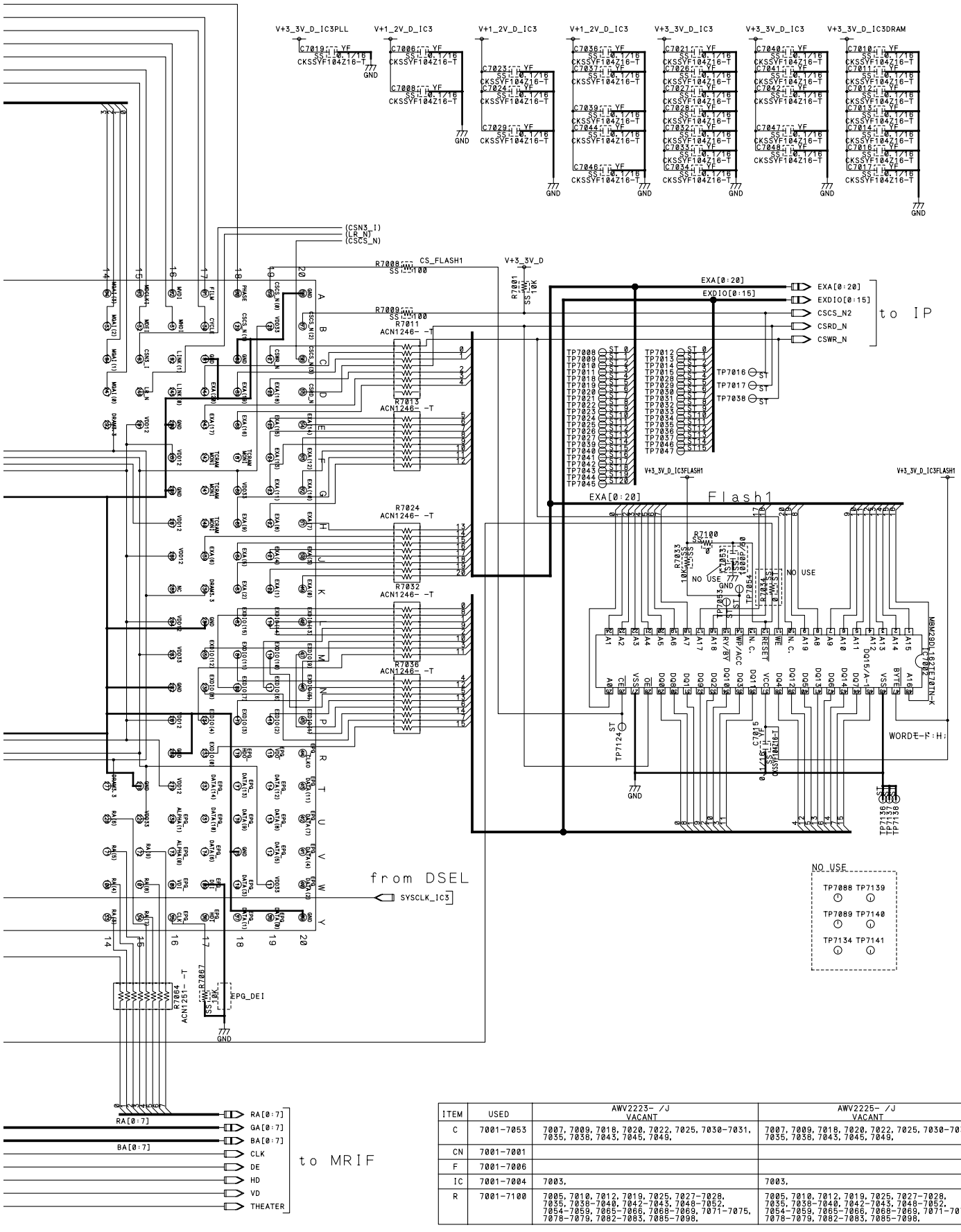


3.29 MR MAIN ASSY (14/16)

MR MAIN ASSY (14/16)

• MULTI BLOCK





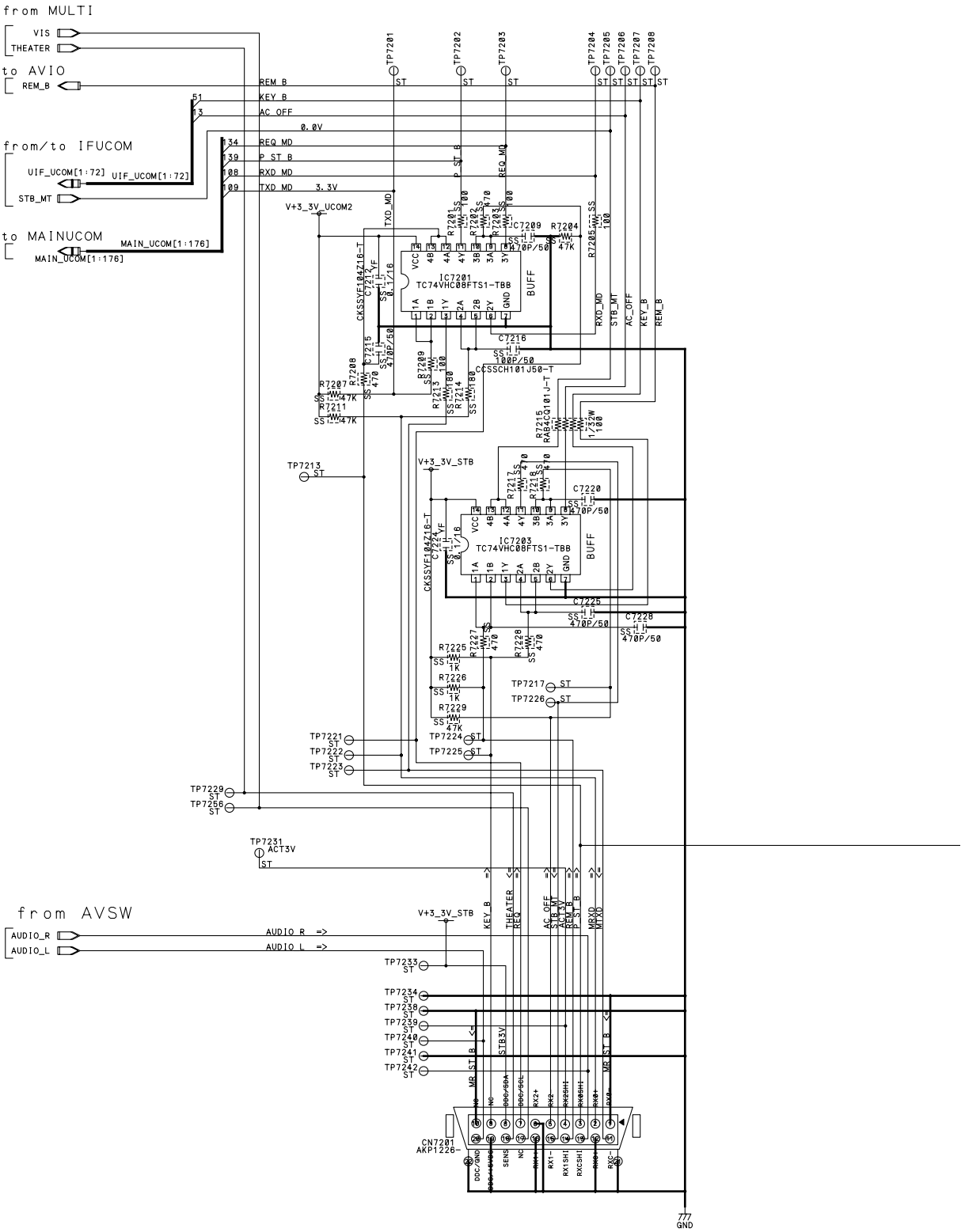
ITEM	USED	AWV2223- /J VACANT	AWV2225- /J VACANT
C	7001-7053	7007, 7009, 7018, 7020, 7022, 7025, 7030-7031, 7035, 7038, 7043, 7045, 7049,	7007, 7009, 7018, 7020, 7022, 7025, 7030-7031, 7035, 7038, 7043, 7045, 7049,
CN	7001-7001		
F	7001-7006		
IC	7001-7004	7003,	7003,
R	7001-7100	7005, 7010, 7012, 7019, 7025, 7027-7028, 7035, 7038-7040, 7042-7043, 7048-7052, 7054-7059, 7065-7066, 7068-7069, 7071-7075, 7078-7079, 7082-7083, 7085-7098,	7005, 7010, 7012, 7019, 7025, 7027-7028, 7035, 7038-7040, 7042-7043, 7048-7052, 7054-7059, 7065-7066, 7068-7069, 7071-7075, 7078-7079, 7082-7083, 7085-7098,

3.30 MR MAIN ASSY (15/16)

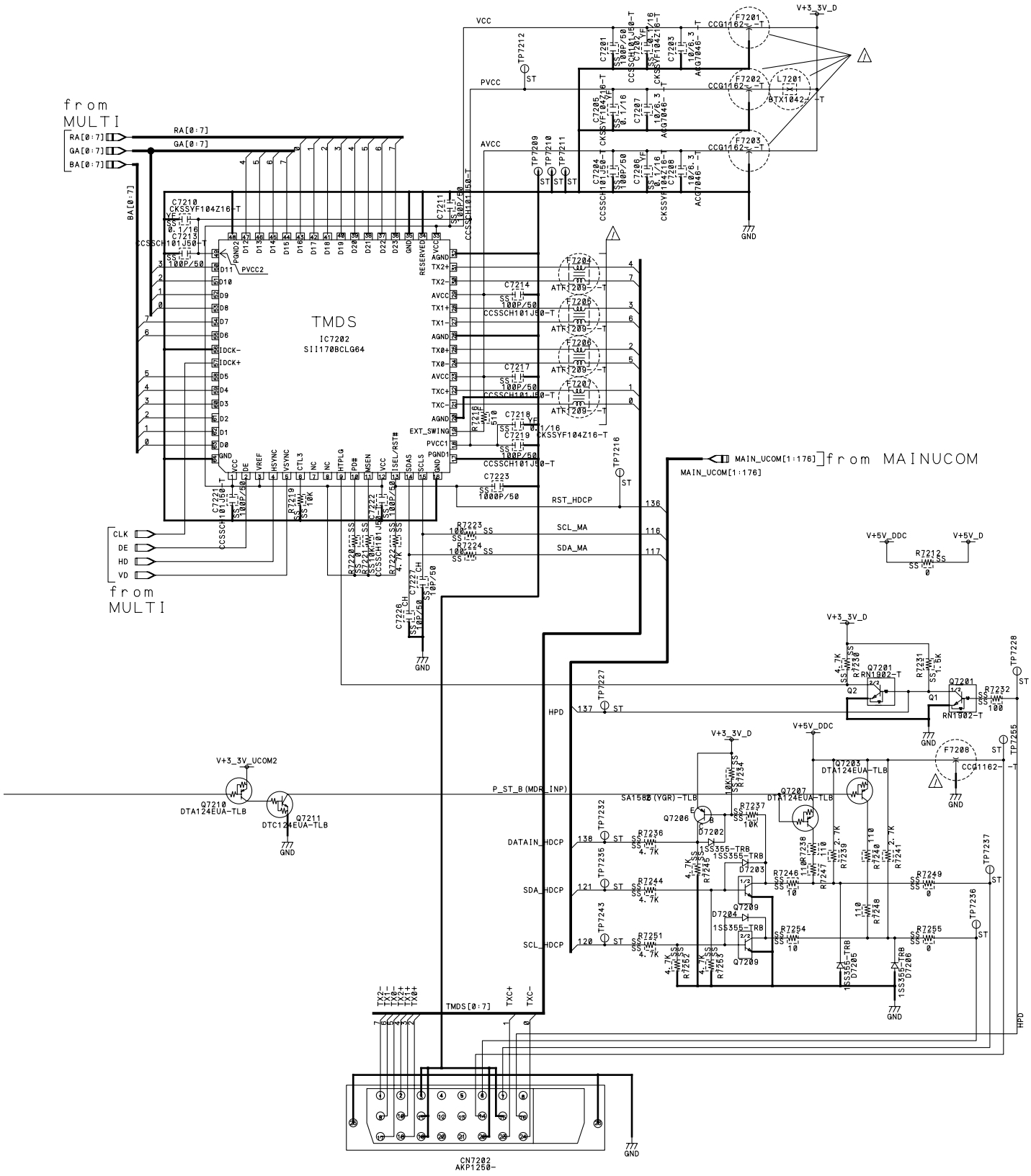
MR MAIN ASSY (15/16)

- MR IF BLOCK

NO_USE : STANDBY



ITEM	USED	AWV2223- /J VACANT	AWV2225- /J VACANT
C	7201-7228		
CN	7201-7202		
D	7202-7206		
F	7201-7208		
IC	7201-7203		
L	7201-7201		
Q	7201-7211	7202, 7204-7205, 7208,	7202, 7204-7205, 7208,
R	7201-7255	7206, 7210, 7233, 7235, 7242-7243, 7250,	7206, 7210, 7233, 7235, 7242-7243, 7250,

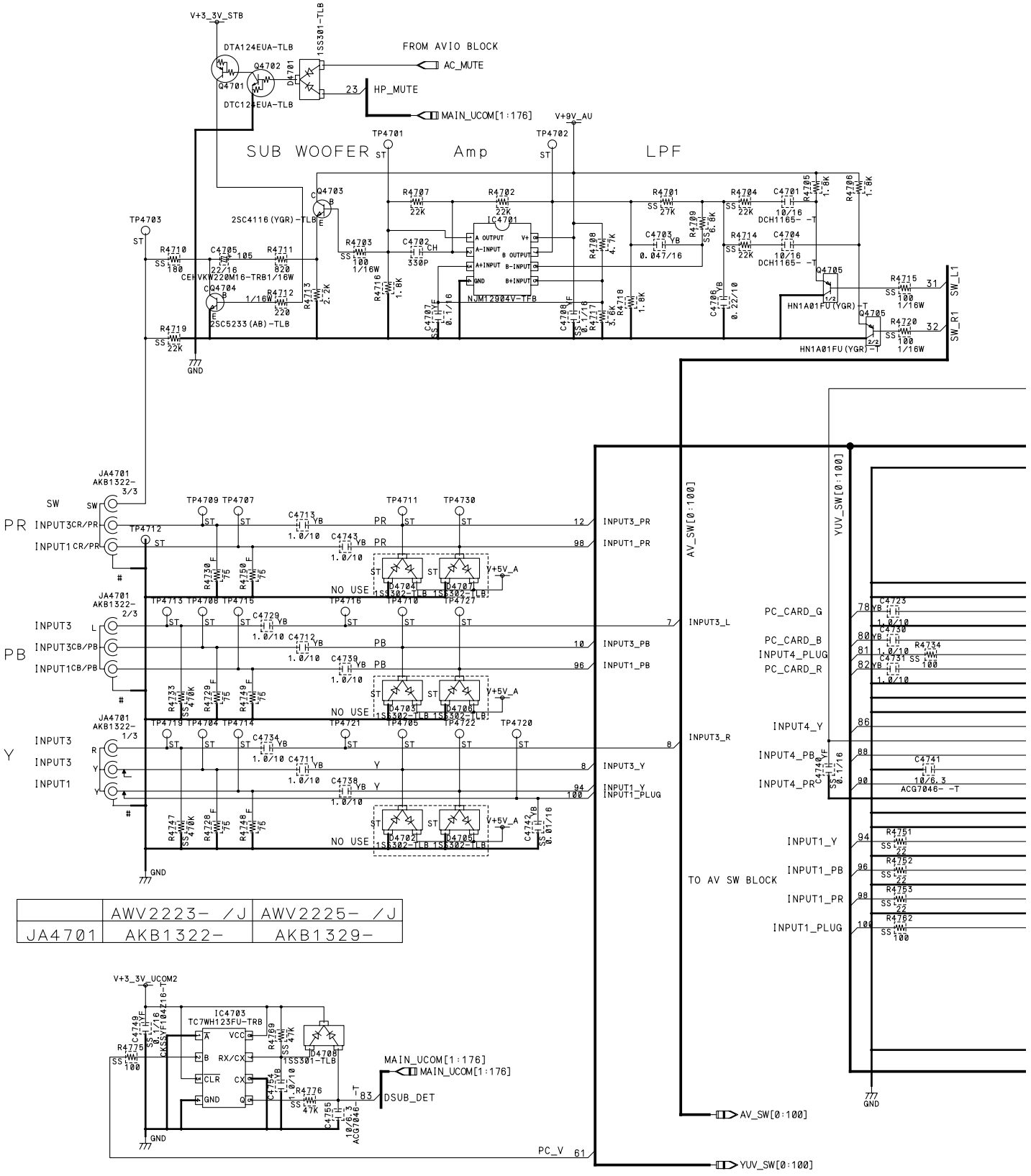


3.31 MR MAIN ASSY (16/16)

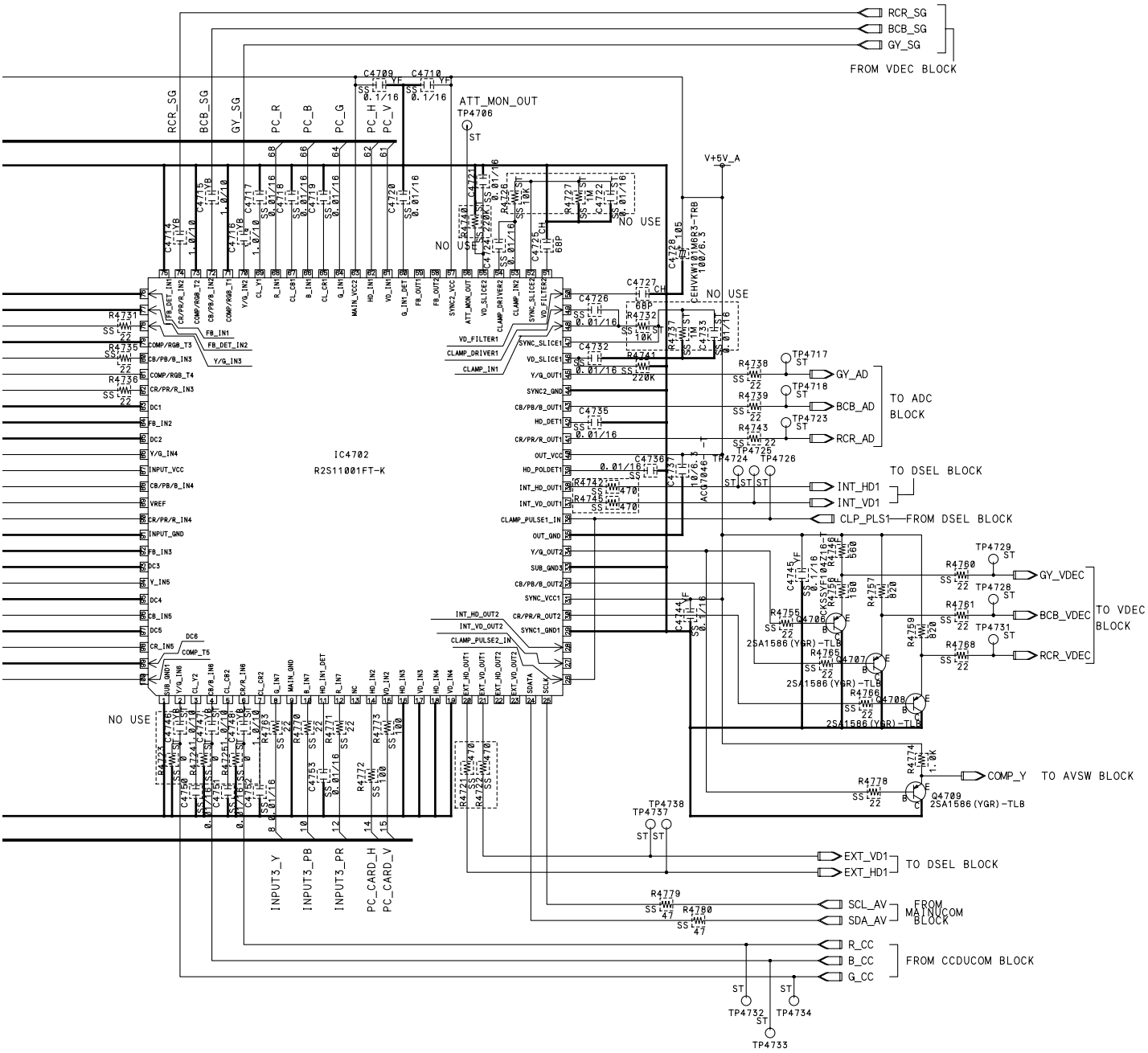
MR MAIN ASSY (16/16)

• RGB SW BLOCK

NO_USE : STANDBY

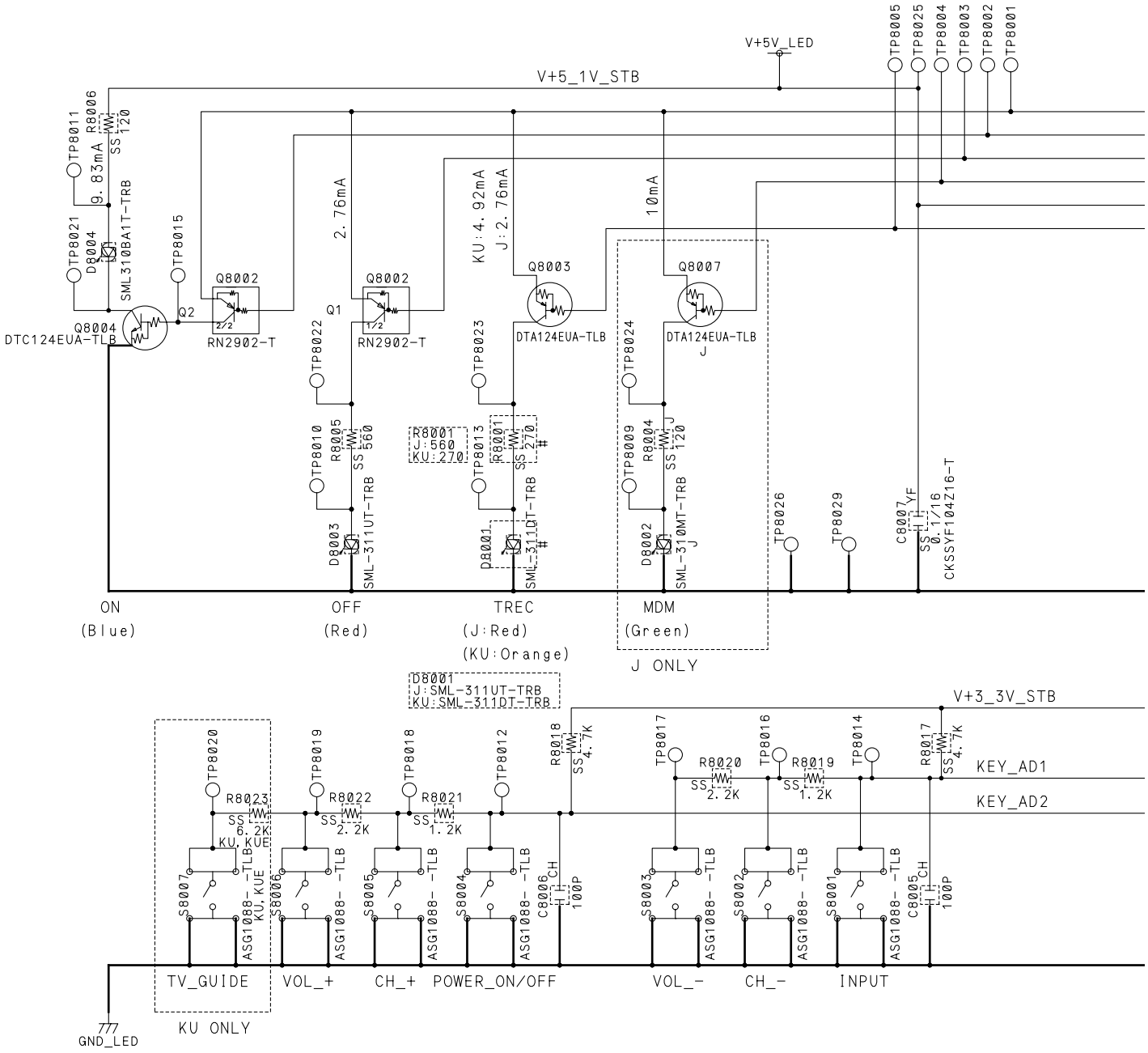


ITEM	USED	AWV2223- /J VACANT	AWV2225- /J VACANT
C	4701-4755		
D	4701-4708		
IC	4701-4703		
JA	4701-4701		
Q	4701-4709		
R	4701-4780	4744, 4754, 4758, 4764, 4767, 4777,	4744, 4754, 4758, 4764, 4767, 4777,



3.32 LED ASSY

LED ASSY



KEY_AD1 voltage

Pushed KEY	Typ.	Thr.
NO USE	3.30	
----	----	2.51
VOL_-	1.39	1.70
CH_-	0.67	0.99
INPUT	0	0.38

[V]

KEY_AD2 voltage

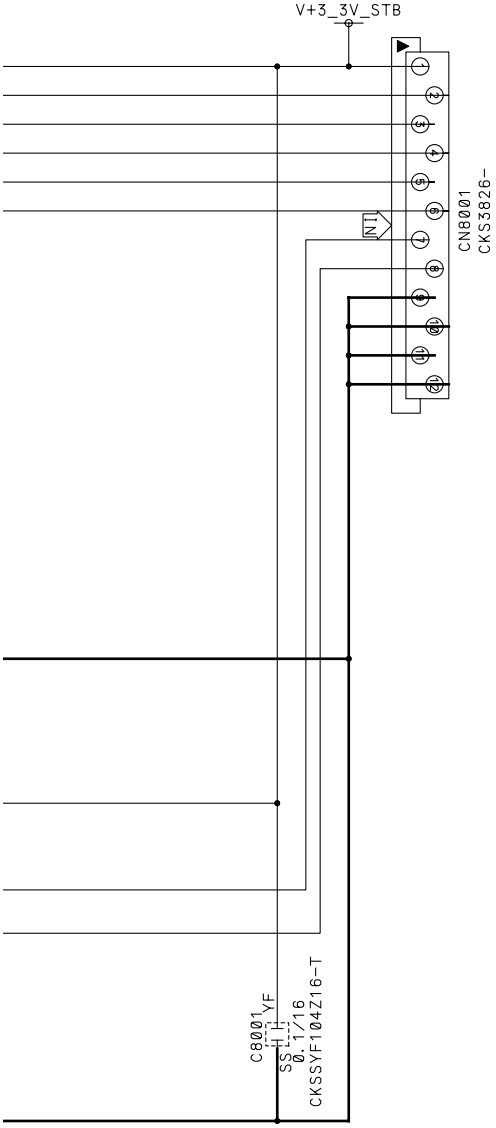
Pushed KEY	Typ.	Thr.
NO USE	3.30	
TV_GUIDE	2.21	2.51
VOL_+	1.39	1.70
CH_+	0.67	0.99
POWER_ON/OFF	0	0.38

[V]

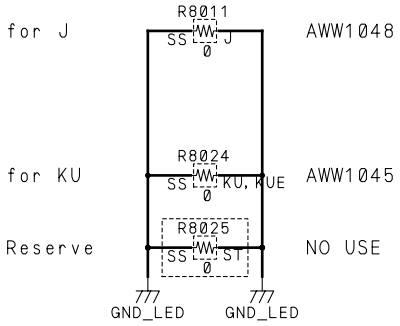
L1

TO FRONT Ass'y

1. V+3_3V_STB
2. LED_ON
3. LED_OFF
4. LED_MDM
5. V+5_1V_STB
6. LED_REC
7. KEY_AD1
8. KEY_AD2
9. GND
10. GND
11. GND
12. GND

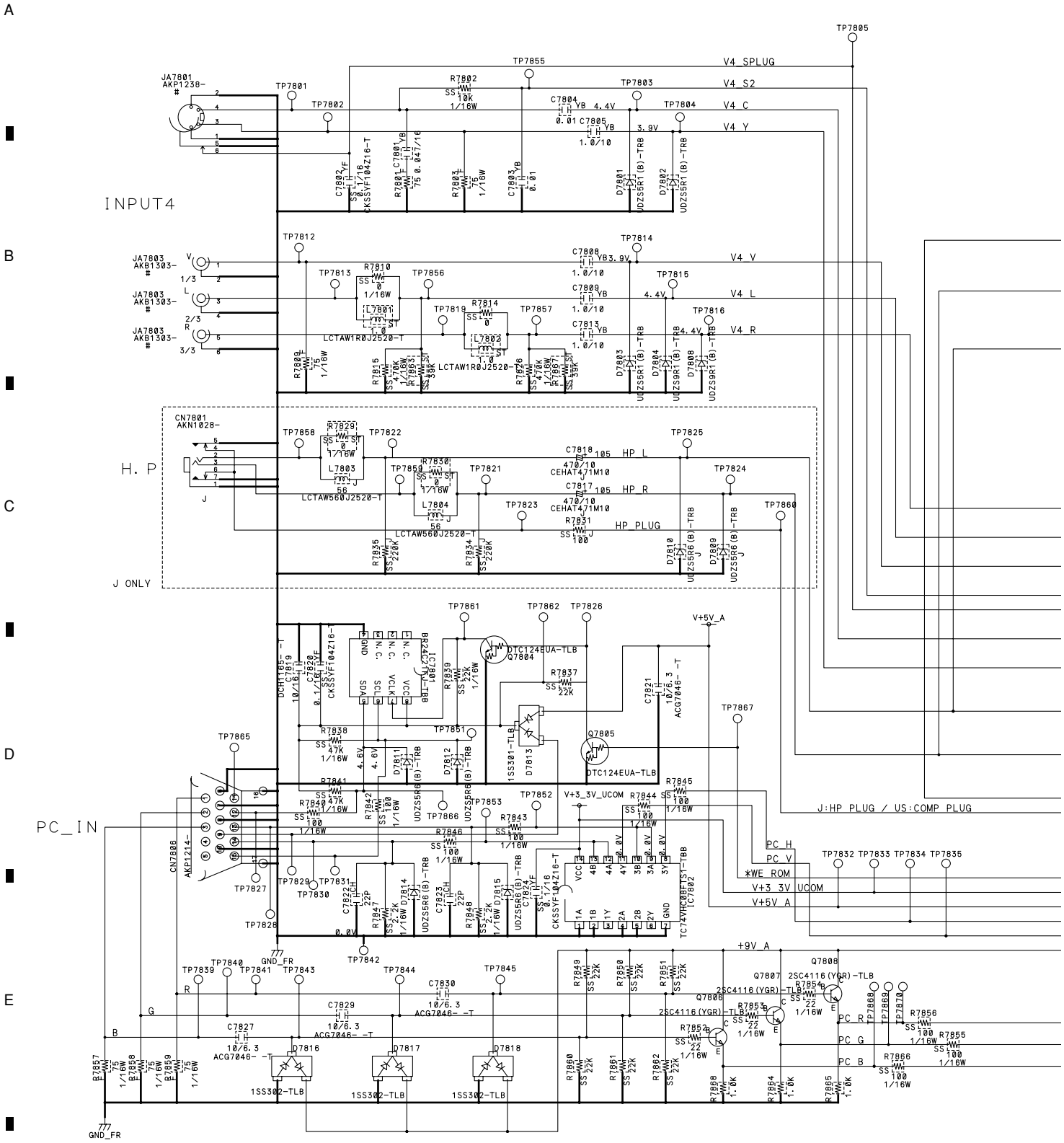


MODEL		PRO-R06U/KUCXJ PDP-R06U/KUCXJ	PDP-R06/JJ
ITEM	USED	AWV2224- (KUE) AWV2226- (KU) VACANT	AWV2228- (J) VACANT
R	8001, 8004-8006, 8011 8017-8025	8004, 8011, 8025	8023, 8024, 8025
C	8001, 8005-8007		
D	8001-8004	8002	
Q	8002-8004, 8007	8007	
CN	8001		
S	8001-8007		8007



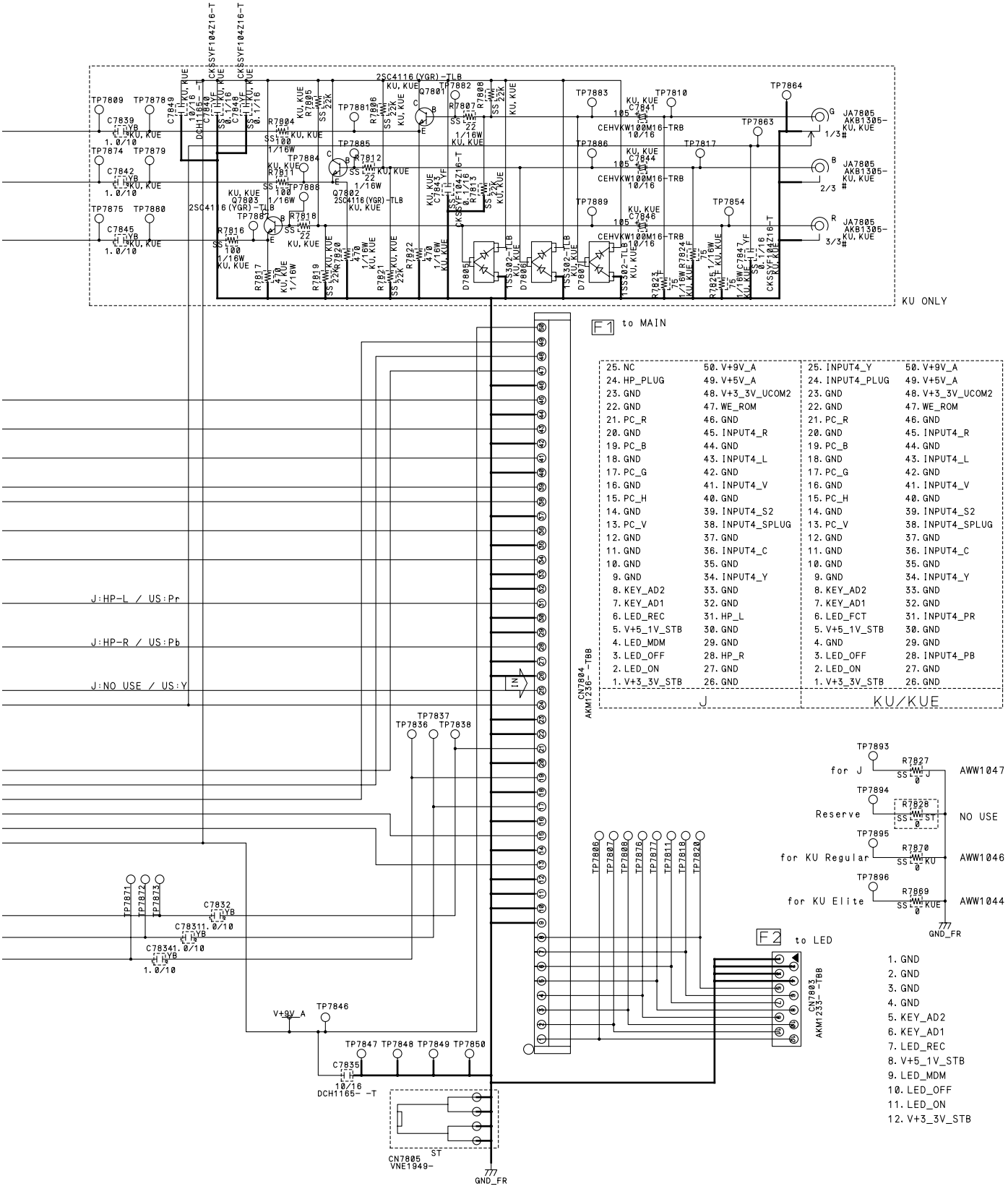
3.33 FRONT ASSY

FRONT ASSY



	J	KU Regular	KU Elite
	AWW1047	AWW1046	AWW1044
JA7803	AKB1303- #	AKB1303- #	AKB1304- #
JA7801	AKP1238- #	AKP1238- #	AKP1239- #
JA7805	Vacant	AKB1305- #	AKB1306- #
CN7801	AKN1028- #	Vacant	Vacant

MODEL		PRO-R06U/KUCXJ	PDP-R06U/KUCXJ	PDP-R06/JJ
ITEM	USED	AWV2224- (KUE) VACANT	AWV2226- (KU) VACANT	AWV2228- (J) VACANT
R	7801-7831, 7834, 7835, 7857-7870	7827-7831, 7834, 7835, 7865, 7867, 7870	7827-7831, 7834, 7835, 7865, 7867, 7869	7804-7808, 7811-7813, 7816-7825, 7828-7830, 7865, 7867, 7869, 7878
C	7801-7805, 7808, 7809, 7813, 7817-7824, 7827, 7829-7832, 7834, 7835, 7839-7849	7817, 7818	7817, 7818	7839-7849
D	7801-7818	7809, 7810	7809, 7810	7805-7807
Q	7801-7808			7801-7803
JA	7801, 7803-7805			7805
CN	7801, 7803-7805	7801, 7805	7801, 7805	7805
IC	7801, 7802			
L	7801-7804	7801-7804	7801-7804	7801, 7802

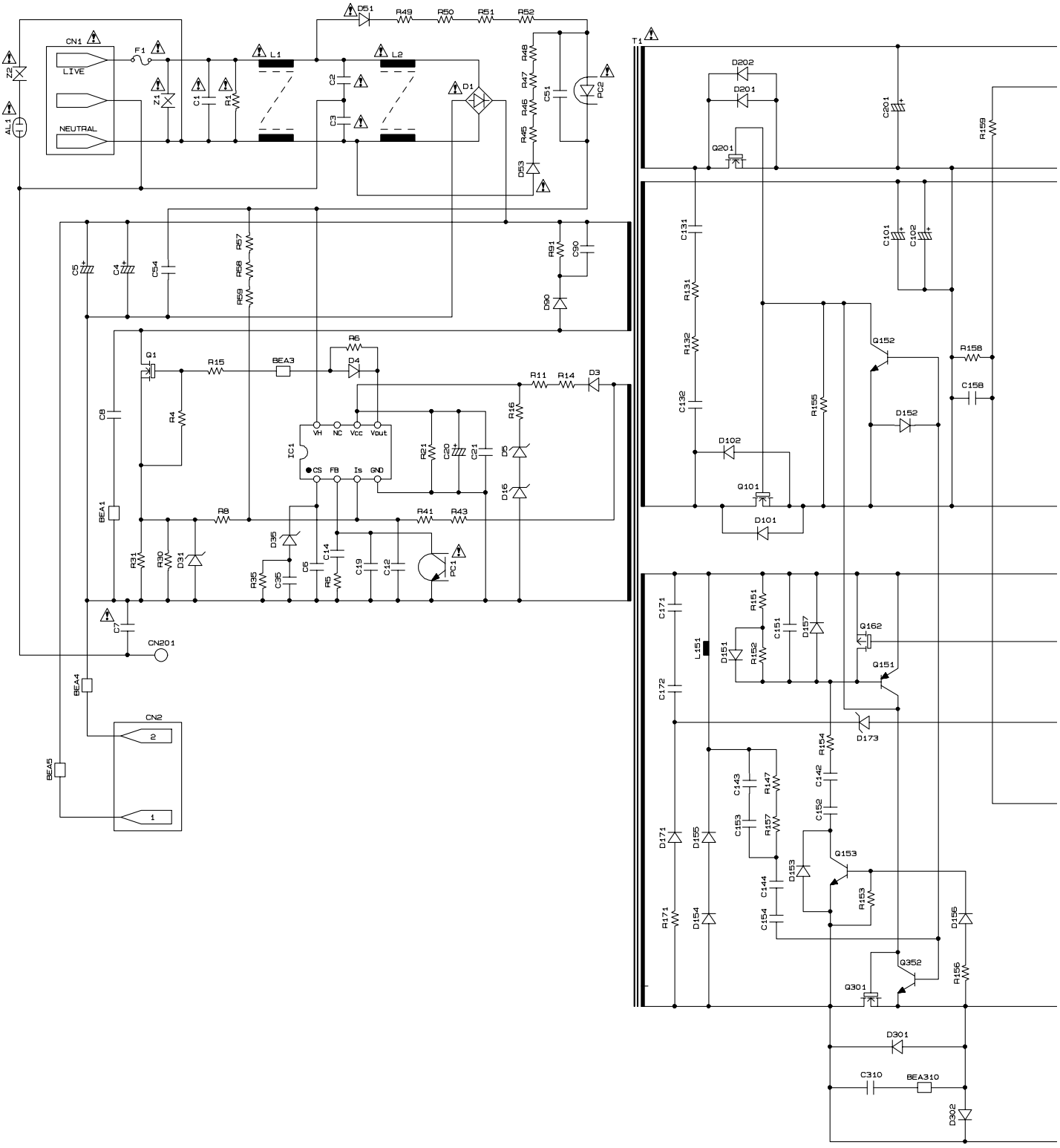


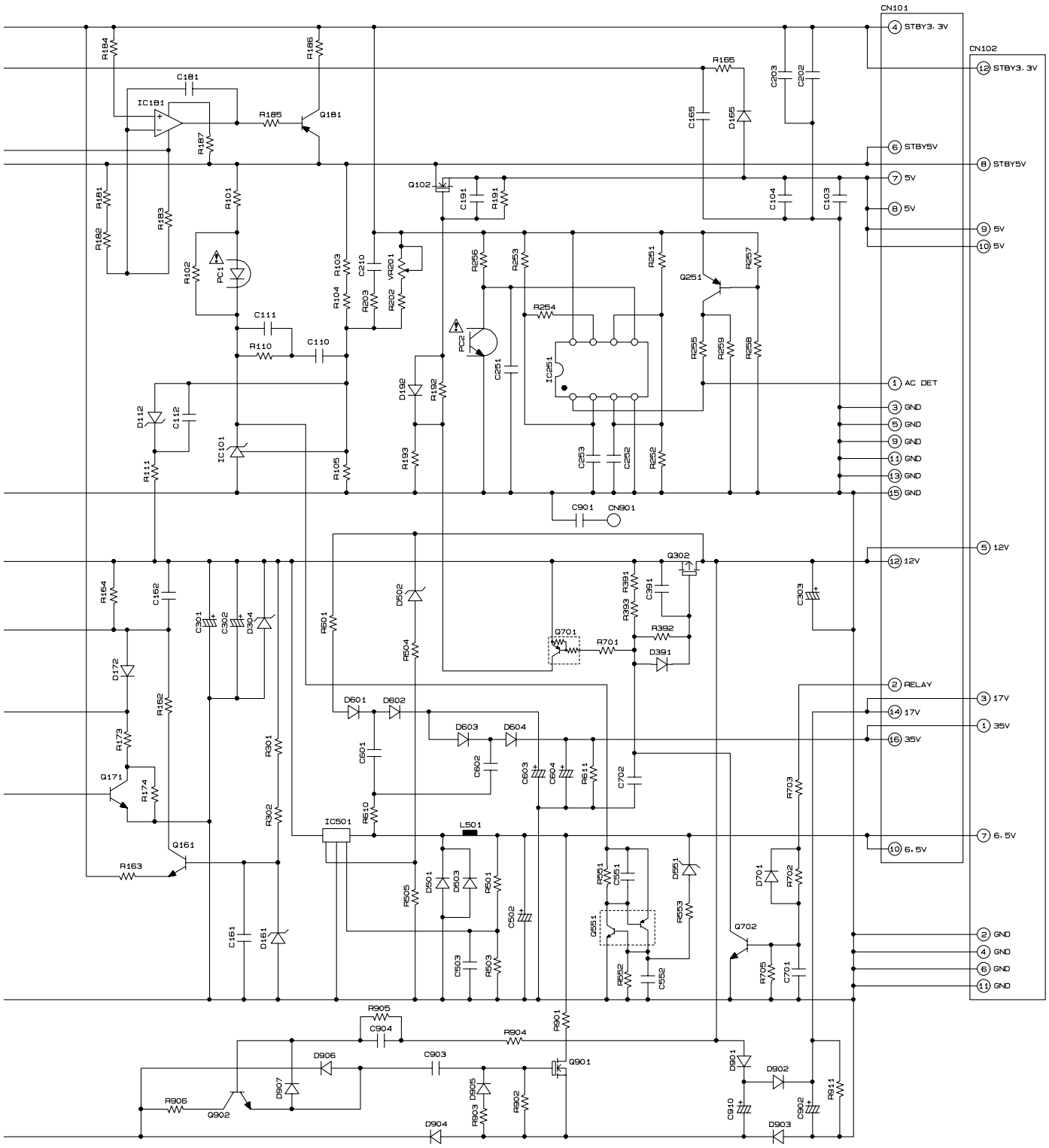
J		KU/KUE	
25. NC	50. V+9V_A	25. INPUT4_Y	50. V+9V_A
24. HP_PLUG	49. V+5V_A	24. INPUT4_PLUG	49. V+5V_A
23. GND	48. V+3_3V_UCOM2	23. GND	48. V+3_3V_UCOM2
22. GND	47. WE_ROM	22. GND	47. WE_ROM
21. PC_R	46. GND	21. PC_R	46. GND
20. GND	45. INPUT4_R	20. GND	45. INPUT4_R
19. PC_B	44. GND	19. PC_B	44. GND
18. GND	43. INPUT4_L	18. GND	43. INPUT4_L
17. PC_G	42. GND	17. PC_G	42. GND
16. GND	41. INPUT4_V	16. GND	41. INPUT4_V
15. PC_H	40. GND	15. PC_H	40. GND
14. GND	39. INPUT4_S2	14. GND	39. INPUT4_S2
13. PC_V	38. INPUT4_SPLUG	13. PC_V	38. INPUT4_SPLUG
12. GND	37. GND	12. GND	37. GND
11. GND	36. INPUT4_C	11. GND	36. INPUT4_C
10. GND	35. GND	10. GND	35. GND
9. GND	34. INPUT4_Y	9. GND	34. INPUT4_Y
8. KEY_AD2	33. GND	8. KEY_AD2	33. GND
7. KEY_AD1	32. GND	7. KEY_AD1	32. GND
6. LED_REC	31. HP_L	6. LED_FCT	31. INPUT4_PR
5. V+5_1V_STB	30. GND	5. V+5_1V_STB	30. GND
4. LED_MDM	29. GND	4. GND	29. GND
3. LED_OFF	28. HP_R	3. LED_OFF	28. INPUT4_PB
2. LED_ON	27. GND	2. LED_ON	27. GND
1. V+3_3V_STB	26. GND	1. V+3_3V_STB	26. GND

1. GND
2. GND
3. GND
4. GND
5. KEY_AD2
6. KEY_AD1
7. LED_REC
8. V+5_1V_STB
9. LED_MDM
10. LED_OFF
11. LED_ON
12. V+3_3V_STB

3.34 POWER SUPPLY UNIT

POWER SUPPLY UNIT



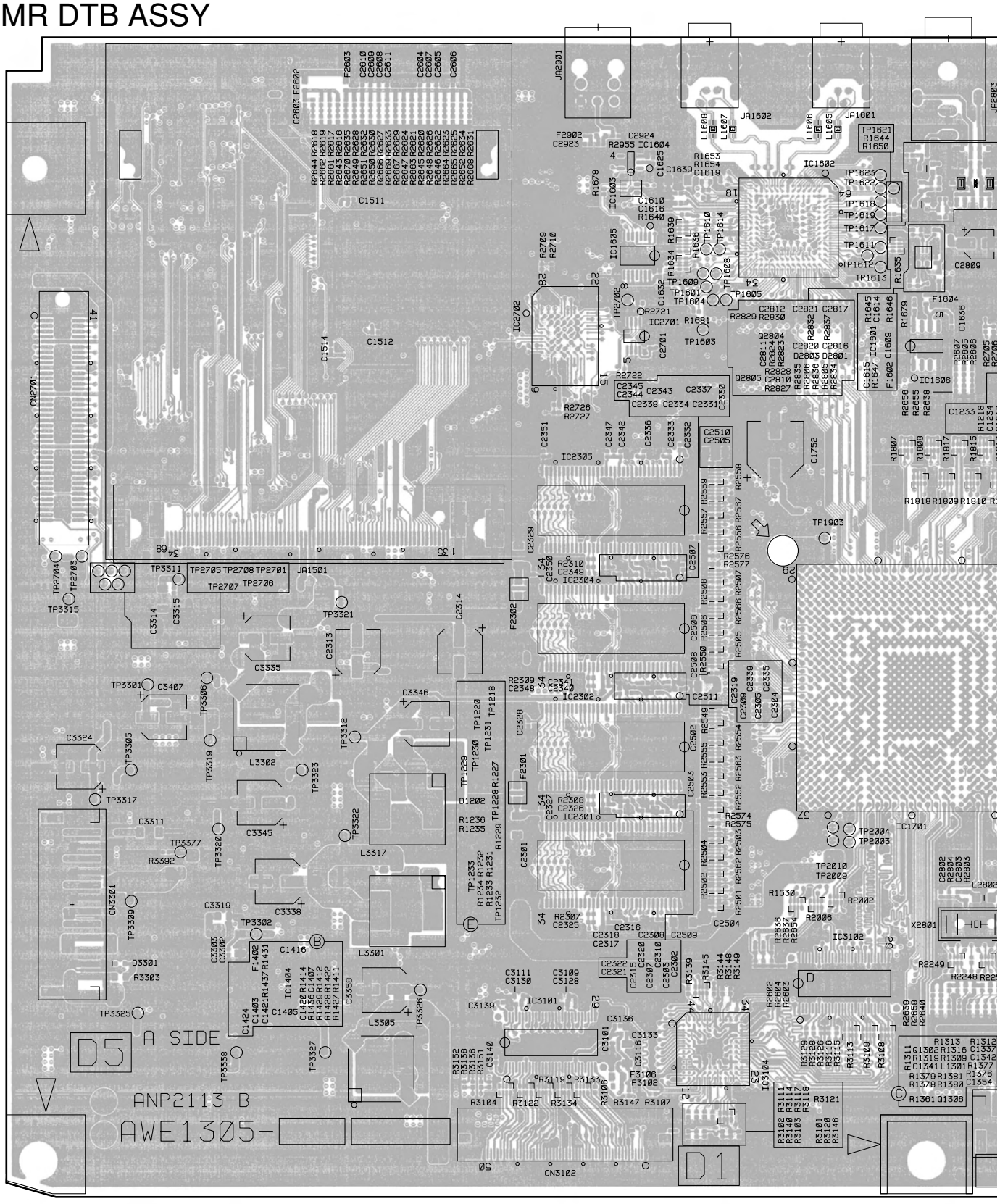

CN101
CN102
STBY3.3V
STBY5V
5V
AC DET
GND
12V
RELAY
17V
35V
6.5V
IC181
IC101
IC501
Q181
Q102
Q251
Q302
Q701
Q171
Q161
Q551
Q702
Q901
Q902
PC1
PC2
IC251
L501
CN901

4. PCB CONNECTION DIAGRAM

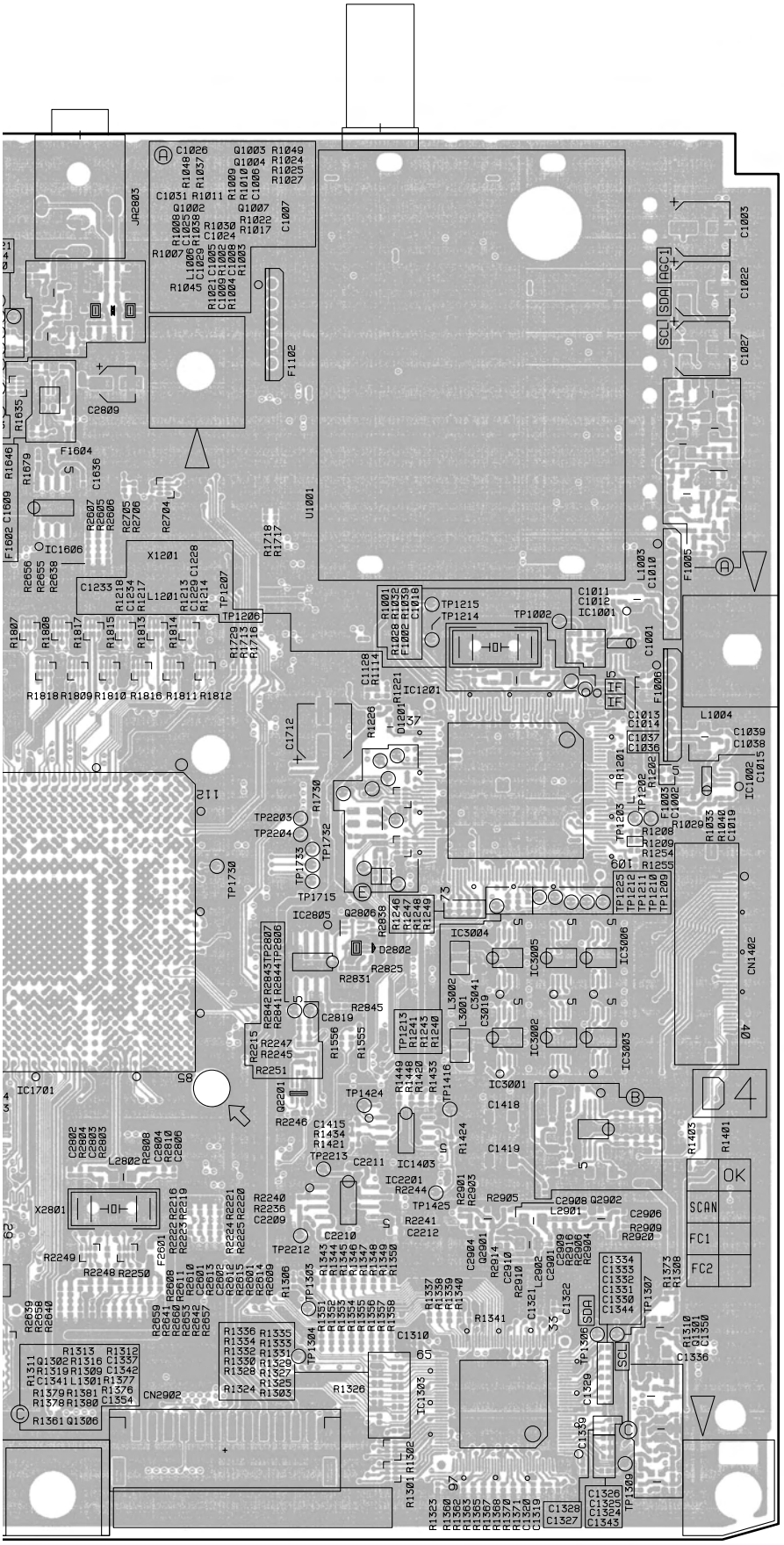
4.1 MR DTB ASSY

SIDE A

MR DTB ASSY



SIDE A



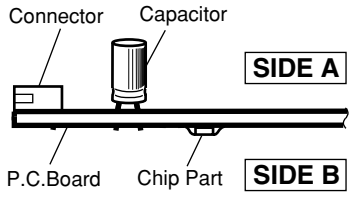
(ANP2113-B)

NOTE FOR PCB DIAGRAMS :

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

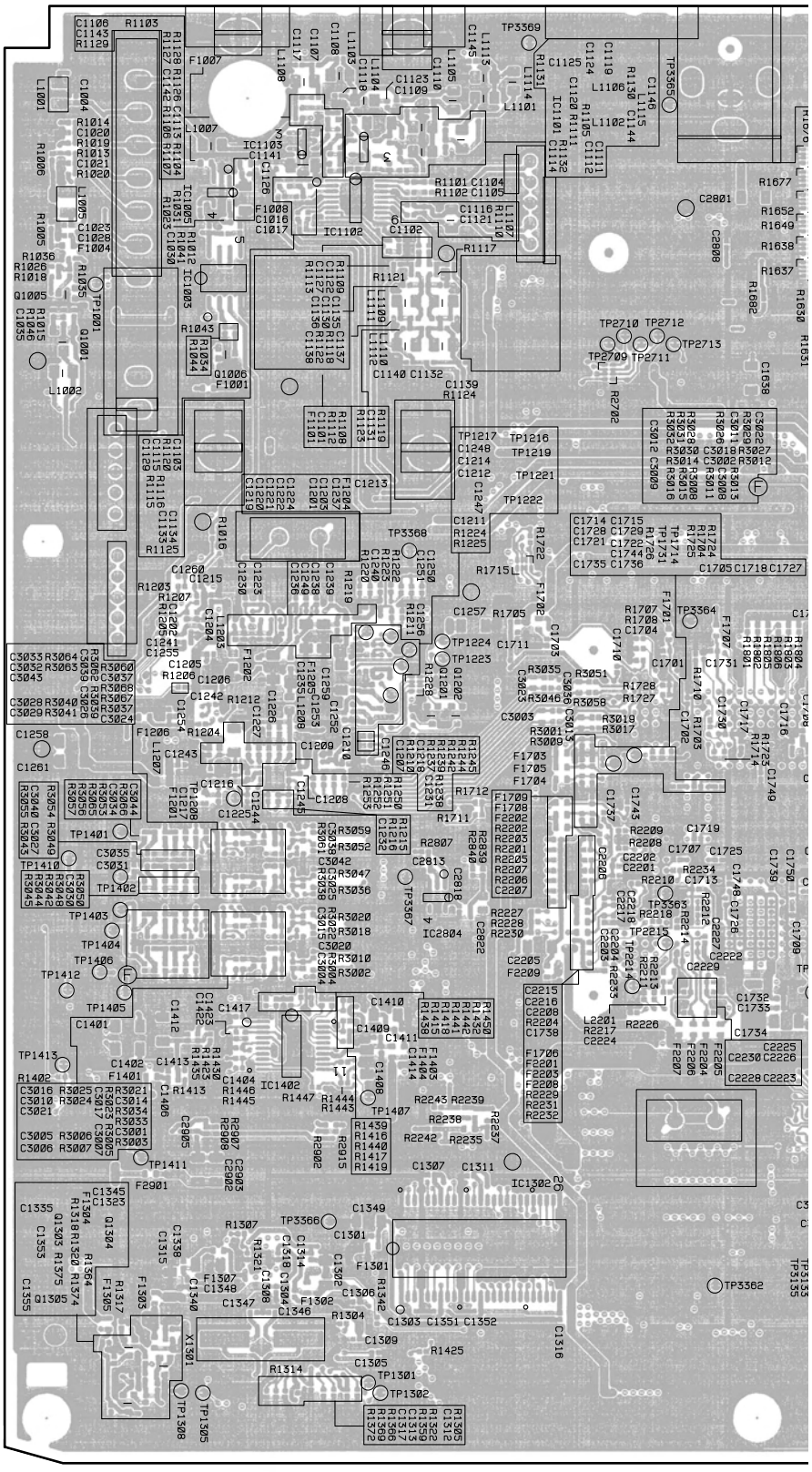
Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
B C E	B C E B C E	Transistor
B C E	B C E B C E	Transistor with resistor
D G S	D G S D G S	Field effect transistor
		Resistor array
		3-terminal regulator

3. The parts mounted on this PCB include all necessary parts for several destinations.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.

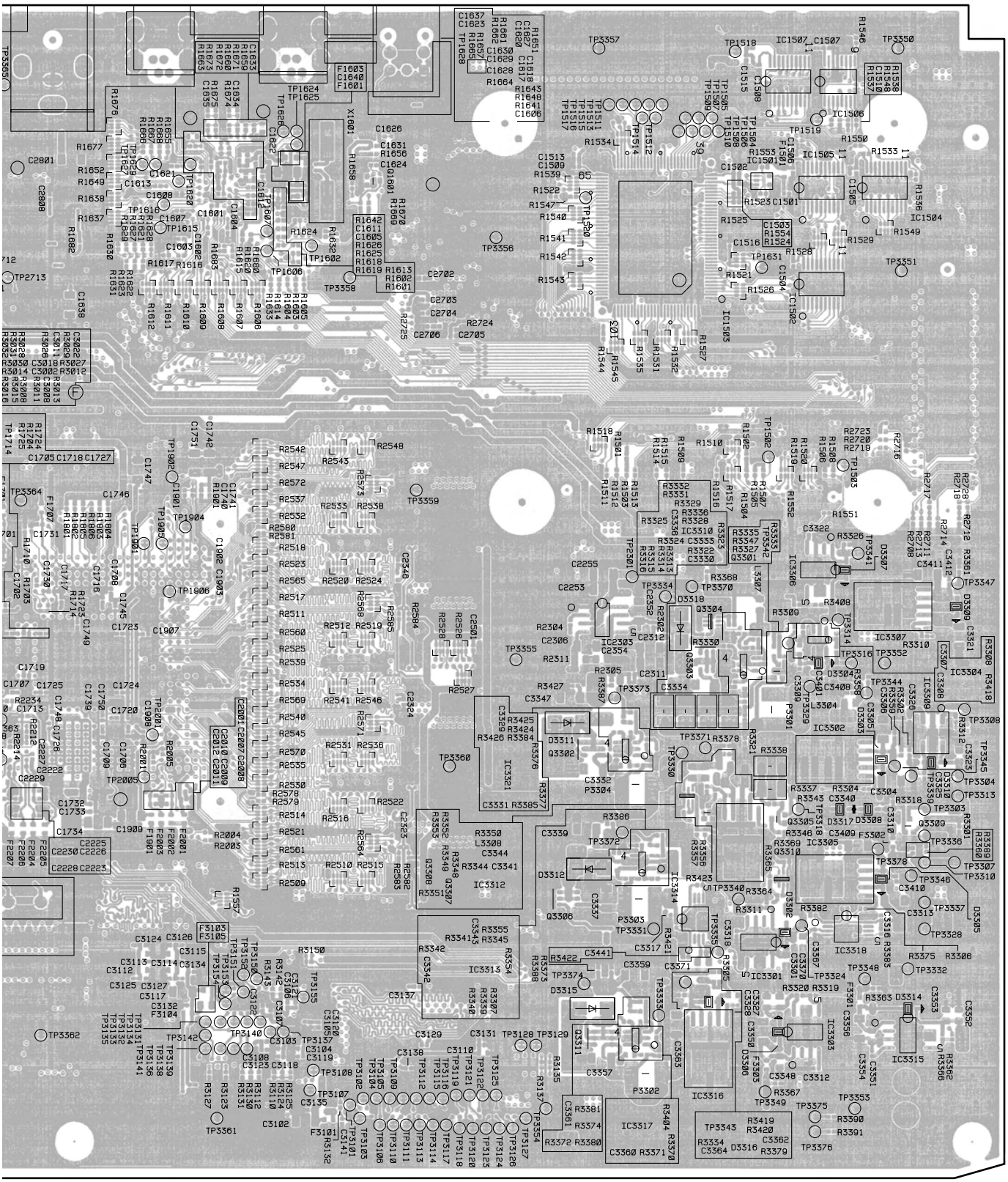


SIDE B

MR DTB ASSY



SIDE B

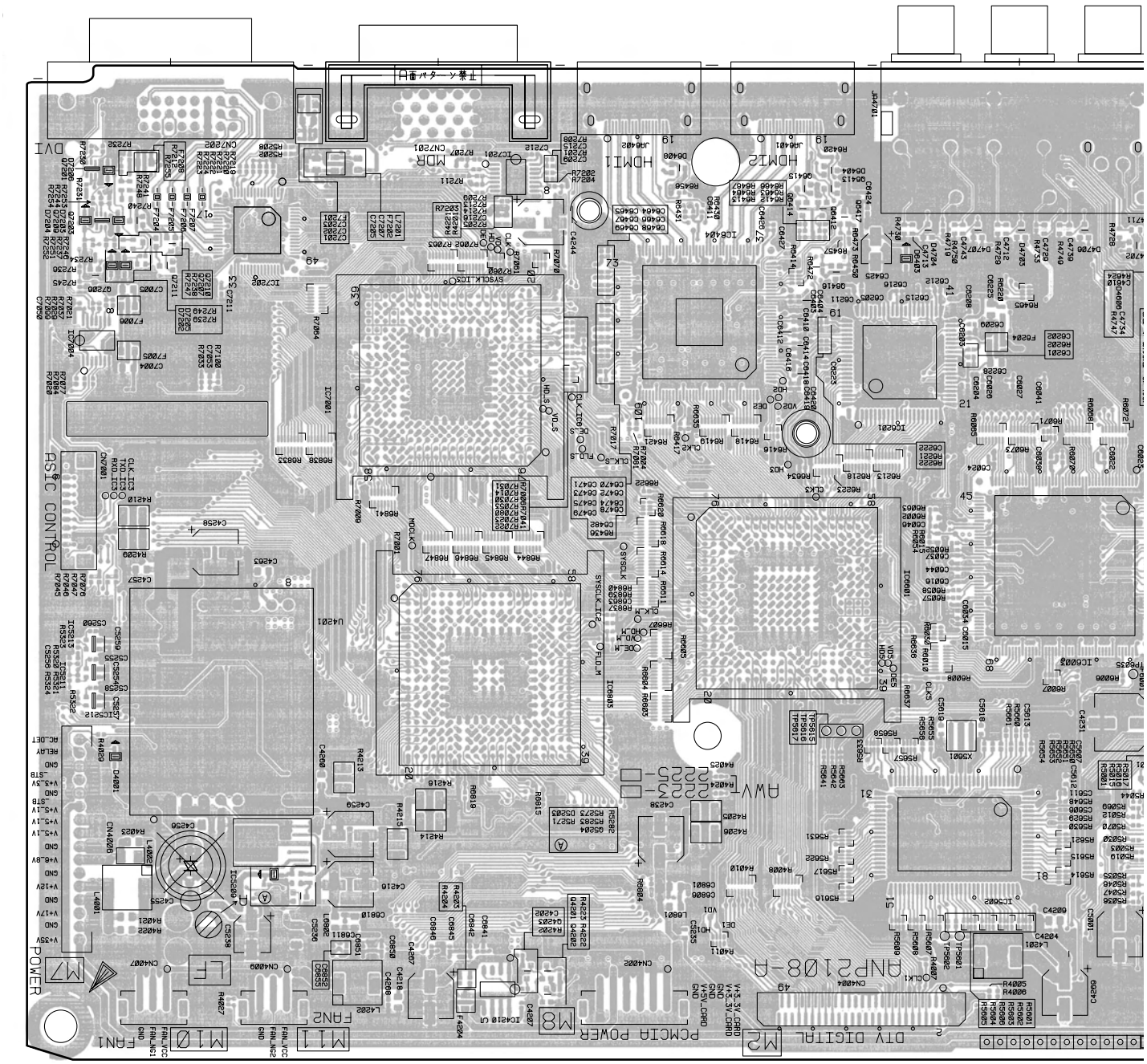


(ANP2113-B)

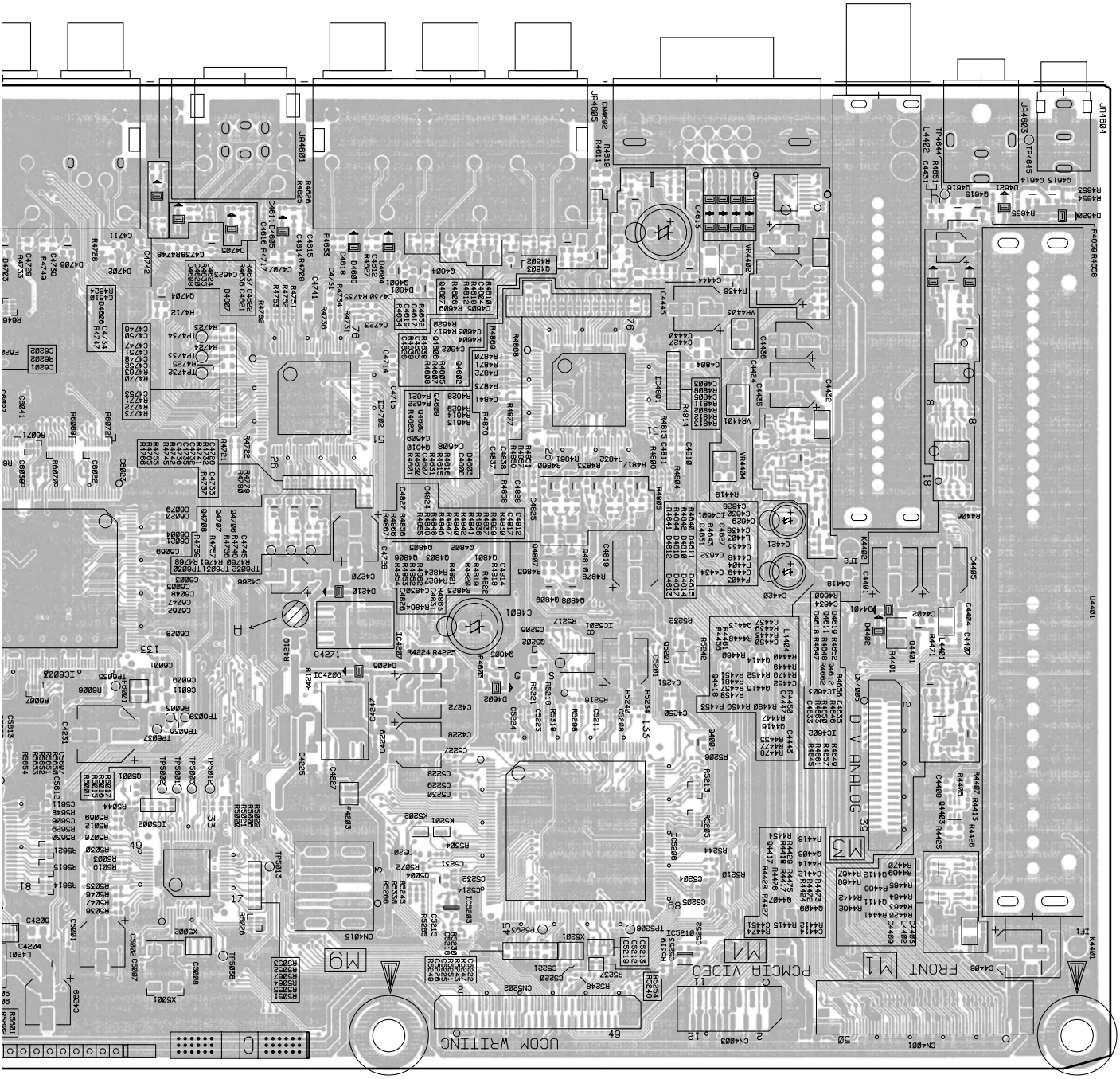
4.2 MR MAIN ASSY

SIDE A

MR MAIN ASSY



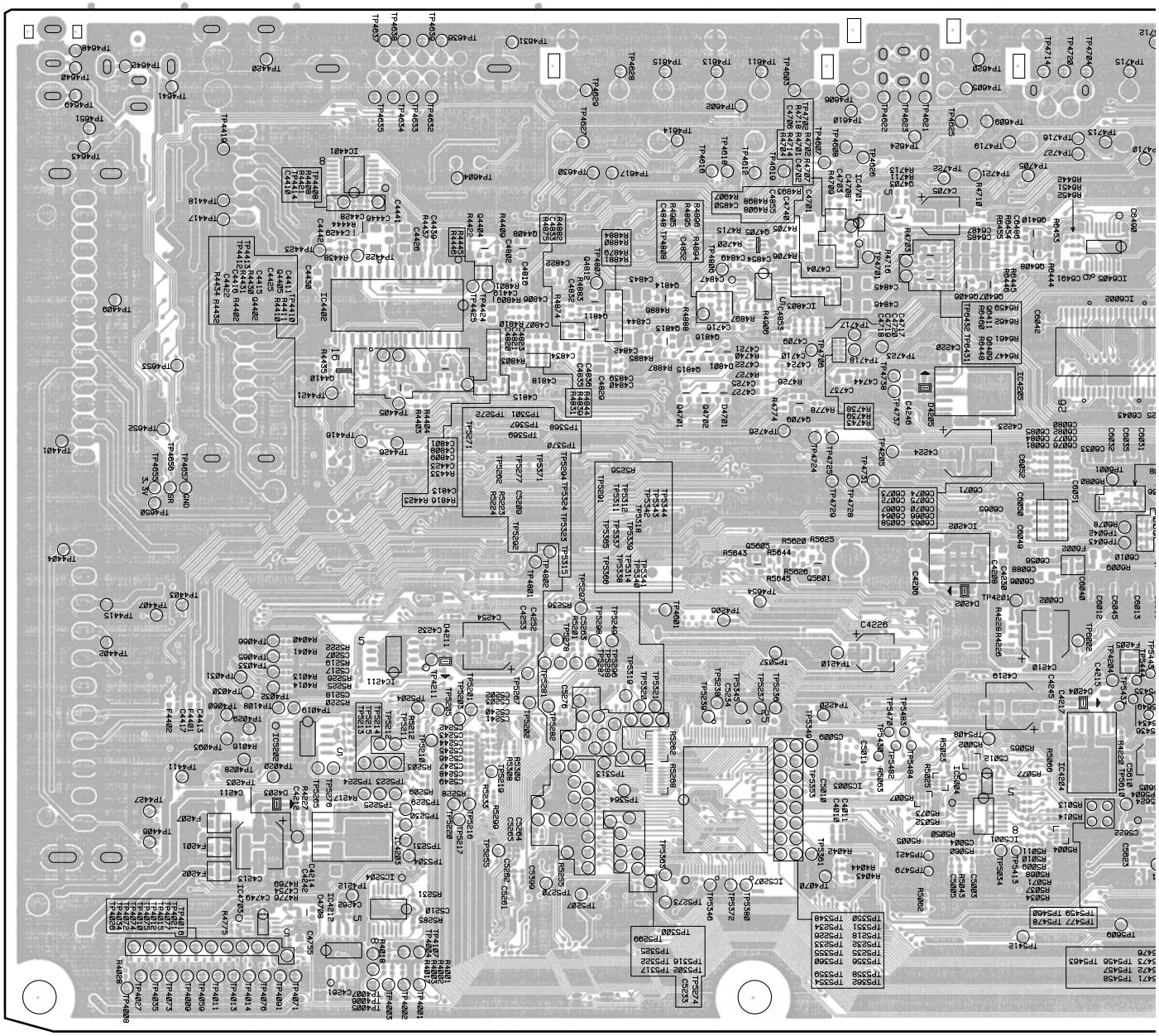
SIDE A



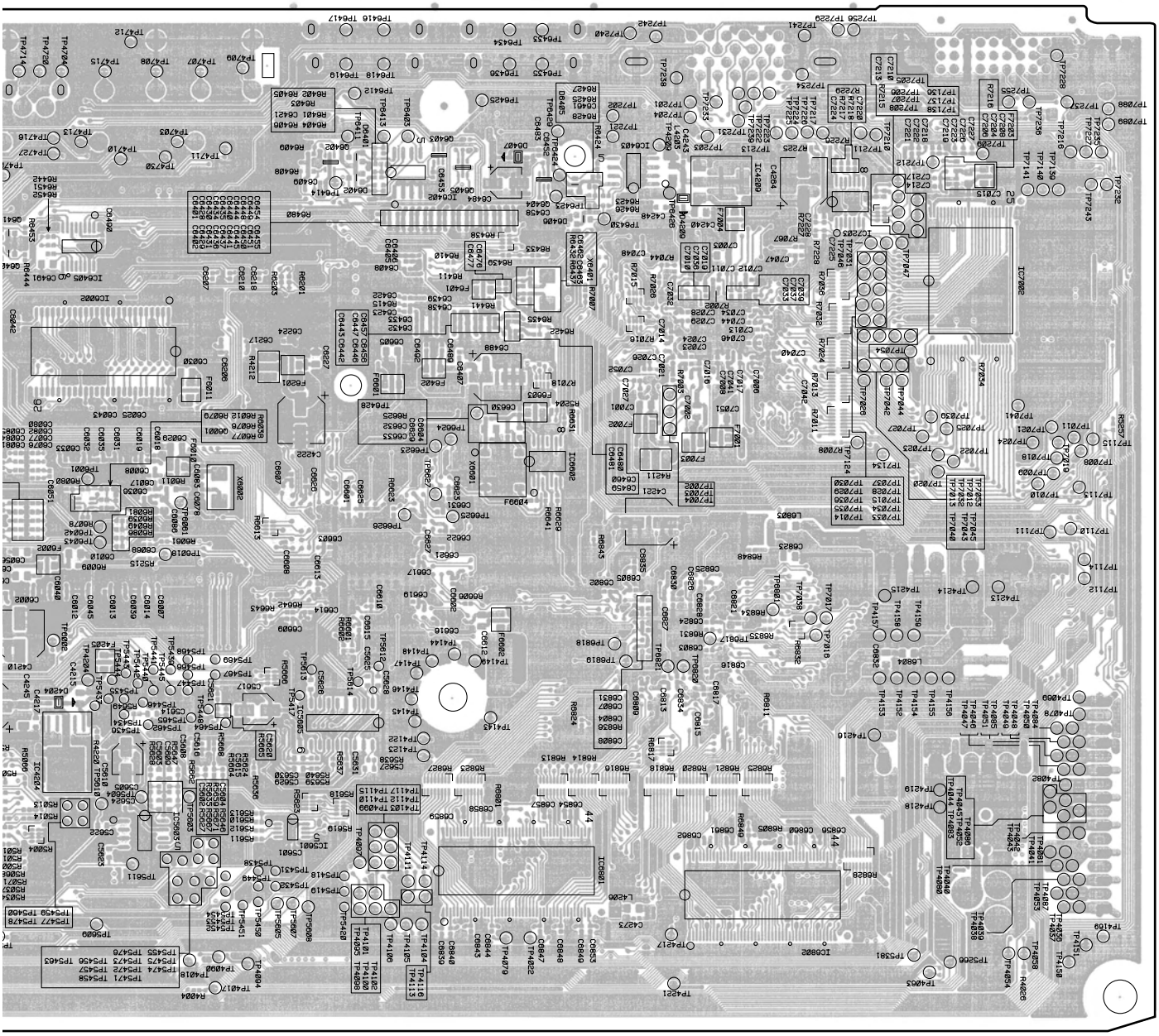
(ANP2108-A)

SIDE B

MR MAIN ASSY



SIDE B

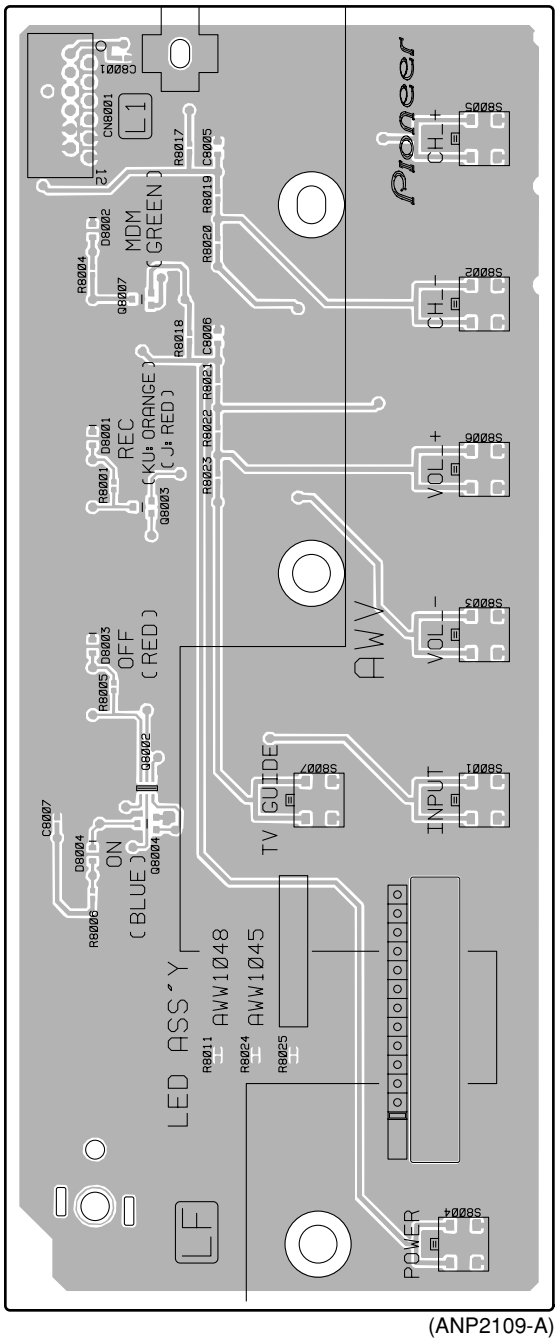


(ANP2108-A)

4.3 LED and FRONT ASSYS

SIDE A

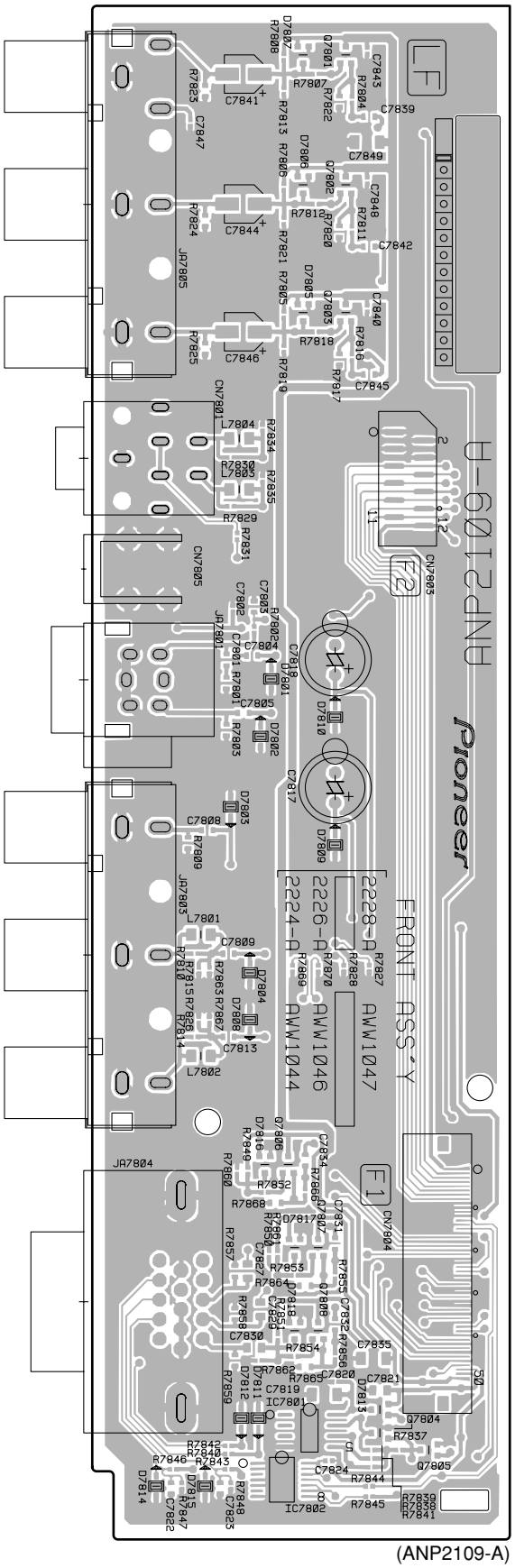
LED ASSY



(ANP2109-A)

SIDE A

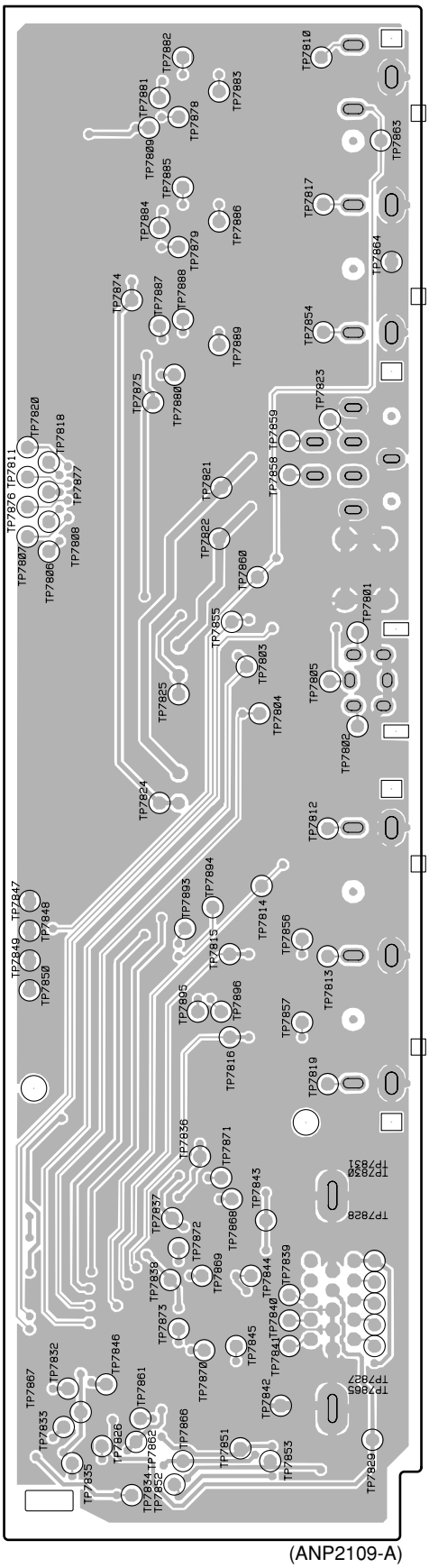
FRONT ASSY



(ANP2109-A)

SIDE B

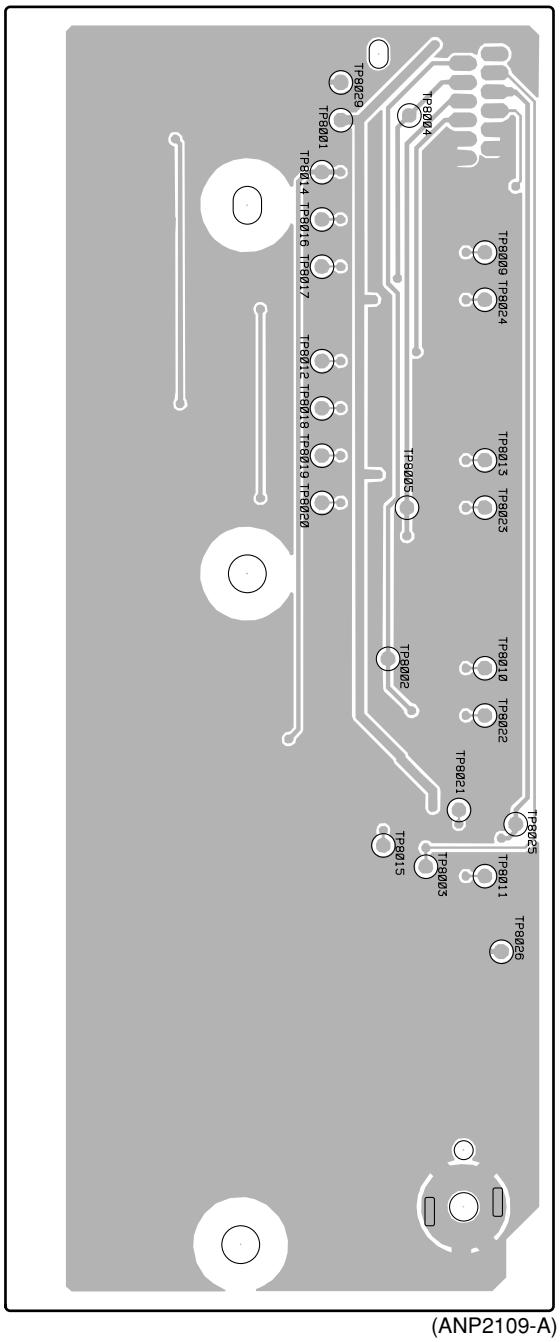
FRONT ASSY



(ANP2109-A)

SIDE B

LED ASSY



(ANP2109-A)

Pioneer sound.vision.soul

Service Manual

ORDER NO.
ARP3233

PLASMA DISPLAY

PDP-615EX

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
PDP-615EX	WYV	AC220-240V	

● This service manual should be used together with the following manual(s).

Model No.	Order No.	Remarks
PRO-1410HD/LUC	ARP3232	

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936

T – ZZR DEC. 2004 Printed in Japan

CONTRAST OF MISCELLANEOUS PARTS

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

■ CONTRAST TABLE

PDP-615EX/WYV and PRO-1410HD/LUC are constructed the same except for the following:

Symbol	Mark	Symbol and Description	Part No.		Remarks
			PRO-1410HD/LUC	PDP-615EX/WYV	
		PWB ASSYS			
A01		MAIN PWB ASSY	937J9M01	937K5M01	
		MISCELLANEOUS ELECTRICAL PARTS			
CN-PI		CN 2-WP(PI) 360W, 1672-18	Not used	7SWXV002	
		MECHANISM PARTS			
M23		CORNER PIECE RB	29F00761	29F00762	
M57	NSP	NAME PLATE	29P06221	29L06211	SPECIAL PARTS
M77		ELITE BADGE	29K00811	Not used	
M77		PIONEER BADGE	Not used	29K00821	
M80		OVER BEZEL BOTTOM(P)	29P01521	29P01581	
		PRINTED & PACKING MATERIALS			
PSC	⚠	POWER CORD E3 L3.0ML	7S552001	7S553004	
SHT001		INSTRUCTION PRO-1410	7S801721	Not used	SPECIAL PARTS
SHT001		INSTRUCTION PDP-615EX	Not used	7S801741	SPECIAL PARTS
PK12		CUSHION (BTM-R)E	Not used	29MS3231	
PK14		CARTON BOX T(PDP-615EX)	29M01071	29M01061	
PK17		BAG, POLYETHYLENE(150x370)	Not used	24813191	
PK33		POWER CORD CASE	29MS3241	Not used	